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No. 1, Vol. XLI.]

JANUARY, 1872.

THIRD SERIES.

THE
FARMER'S MAGAZINE,
AND
MONTHLY JOURNAL
OF
THE AGRICULTURAL INTEREST.

Dedicated
TO THE
FARMERS OF THE UNITED KINGDOM.

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4 lb. for 20 sheep, price, jar included.....	£0	2	0
6 lb. 30 " " " " " " " " " " " " " " " "	0	3	0
8 lb. 40 " " " " " " " " " " " " " " " "	0	4	0
10 lb. 50 " " " " " " " " " " " " " " " "	0	5	0
20 lb. 100 " " " " " " " " " " " " " " " "	0	10	0
30 lb. 150 " " " " " " " " " " " " " " " "	0	15	0
40 lb. 200 " " " " " " " " " " " " " " " "	1	0	0
50 lb. 250 " " " " " " " " " " " " " " " "	1	3	6
60 lb. 300 " " " " " " " " " " " " " " " "	1	7	6
80 lb. 400 " " " " " " " " " " " " " " " "	1	17	6
100 lb. 500 " " " " " " " " " " " " " " " "	2	5	0

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To Mr. Thomas Bigg Professor of Chemistry.

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"I remain, dear Sir,

"For JOHN TINGEY, Esq.,

"To Mr. Thomas Bigg."

"R. RENNEY.

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THE FARMER'S MAGAZINE.

JANUARY, 1872.

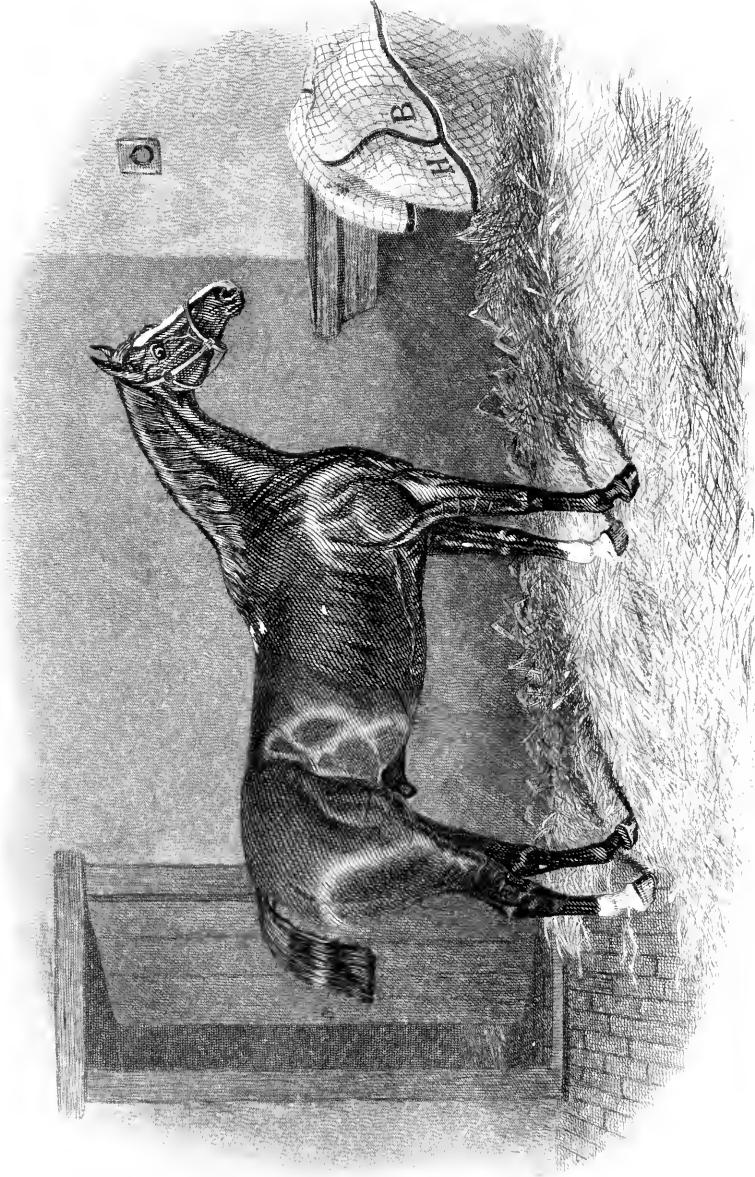
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Reiderer

Illustration of a horse in a stable, rearing up on its hind legs.



THE MAN AND HIS DOGS

THE FARMER'S MAGAZINE.

JANUARY, 1872.

PLATE I.

BORDERER; A PRIZE HUNTER.

THE PROPERTY OF MR. HARVEY BAYLY.

Borderer, a chestnut horse standing sixteen hands high, was bred by Mr. Hudsmith at Brampton in Cumberland, in 1866; and is by Clansin, an out of a Galaor mare.

Borderer was picked up early in life by Mr. John Booth, of Killerby, who took the colt into the show-ring as a two-year-old in 1868, when he won the first prize at Bedale and the second at Richmond—of course in hunting classes.

In 1869, when a three-year-old, Borderer took first prize at the Darlington show, first at the Hexham meeting of the Northumberland Agricultural Society, first at the Cleveland Society's meeting at Middlesborough, second at Richmond, and second at Scarborough—as a three-year-old hunting gelding.

In 1870 Borderer was put second at Islington in the four-year-old class, when he was purchased by Mr. Harvey Bayly, as whose property he took a first prize at the Wakefield meeting of the Yorkshire Agricultural Society.

In 1871, as a five-year-old, Borderer took second

prize at the Wolverhampton meeting of the Royal Agricultural Society of England, second prize at the York meeting of the Yorkshire Agricultural Society, first prize at Birmingham, first prize at Liverpool, and first prize at Southwell.

Borderer also took some premiums as a foal and a yearling when shown by his breeder about home, in Cumberland.

Mr. Bayly tells us he cannot speak too highly of his horse's "manners" as a hunter—temperate, sensible, very stout, and a good goer. Mr. Harvey Bayly, "well known in Bedfordshire," is now hunting the Rufford country in Nottinghamshire, where for his own riding he is set up, amongst others, with two famous show-horses, Borderer and Banner-bearer, who between them won in 1871 no less than £411 10s. in prize-money. Our own reports, month for month past, will best speak to the character of these crack nags, both by the way from the experienced hands of another M.F.H., Mr. John Booth, of the Bedale.

PLATE II.

AT HOME OR ABROAD?

And Master Crafty himself would scarcely seem able to answer the query, as, no doubt, when *impletur veteris Bacchi pinquisite ferinae*—that is, when well primed with 'baeca, old beer, and fat bacon—he has stopped many a good fox *in* before now. The terriers have clearly been very busy, and the mongrel hound proclaims him at home—so far as this may be trusted—at the top of his voice. But those "crafty earth-stoppers," like

OLD SERIES.]

sub-editors and journeymen bakers, lead a hard life of it, though so long as the world gets its morning paper and hot rolls by breakfast-time, with a flying fox well found afterwards, what cares it whether its "fellow-creatures" ever go to bed or not? So we will not be too captious, and if Reynard should be abroad there looks to be a bit of nice open country before him when he sees the oak sported at home.

B

[Vol. LXXI.—No. 1

THE FARMERS' CLUB.

BREEDING—FACTS AND PRINCIPLES.

The last meeting before the Christmas recess, was held on Monday evening, December 4th, at the Club House, Salisbury-square, Mr. J. B. Spearing, presiding. The subject fixed for discussion, was, "Breeding—Facts and Principles," to be introduced by Mr. J. K. Fowler, of Prebendal Farm, Aylesbury.

The CHAIRMAN in opening the proceedings, said the subject for that evening's discussion was one of the greatest importance, and upon it, he might safely say, the whole success of stock-breeding depended. If there were any mistake as regards the observance of proper principles, stock-breeding generally ended in failure. He would not, however, make any remarks, but at once introduce Mr. Fowler, who was well known to them all, and who would be sure to introduce the subject in such an able and practical manner as to do full justice to it (cheers).

Mr. J. K. FOWLER said: Some years ago my friend Mr. James Howard, M.P. for Bedford, and late chairman of this Club, called my attention to a paper read by the late Mr. Reginald Orton, at the Newcastle Farmers' Club, on the "Physiology of Breeding," and he sent me a copy for perusal. It made a great impression on me at the time, and having many advantages of testing several of Mr. Orton's propositions, I commenced some experiments, and began to examine the truth of his premises, and have found them in the main correct. The principal proposition was, that "the male gives the external organs, the skin, the muscle, and the bones—and the female the internal organs, which are the whole circulatory, respiratory, and digestive organs. The male in fact giving the locomotive powers, the female the vital organs." Mr. Orton gives credit to Mr. Walker for first enunciating this theory as far back as 1841, and which is published in Stephen's "Book of the Farm." Mr. Howard suggested to me when the committee was selecting subjects for discussion for the present year, that this subject should be taken up, as one of great interest to the Club, and also to the public generally, and I hope my humble efforts will be the means of drawing special attention to the subject. The paramount importance of providing food for the people, especially an adequate supply of "animal food," is a serious problem to be solved, and anything which can increase, not only the number of animals, but their size and quality, must be read and studied by every agriculturist in the kingdom; if, therefore, some broad principles for our guidance can be established, it will make cattle breeding more certain in its results, and render that which is now treated almost as a matter of chance, a comparative certainty. I would say "What to breed, feed, and avoid," should be our standing motto—and as my paper is on "Breeding—facts and principles," I will begin by stating such facts as have come to my own knowledge, and such as have been communicated to me by some of the most eminent breeders and others in England, and then state what principles I think would be desirable for perpetuating the best animals in general use as agricultural stock. Mr. Orton, in his most able paper read at Newcastle-on-Tyne, commences by stating the following facts with regard to the Mule; and as this is so plain and so easy of comprehension, I adduce it here, that you may be able at once to comprehend the broad proposition with which I started. He says, you are doubtless aware, that if the male ass is put to a mare, the produce is a mule, and the produce is essentially a modified ass—the ears are long, the mane erect, the tail thin, the legs slender, the hoofs high and contracted, in fact, clearly taking after the male animal. But few are perhaps aware that when a stallion is put to the ass, the produce is called a Hinny, and this is essentially a modified horse, the ears are short, but somewhat longer than a horse, the tail bushy, the skin finer, the legs longer, and the hoofs flat like the horse. You will see, therefore, how closely the progeny in appearance follows the male. But now comes a very noticeable peculiarity, the body and barrel of the first-named, the mule, are round and full, which

resembles the mare, and those of the hinny are flat and narrow, like the ass; but the vital or internal organs of the mare being so much larger than the ass, require a larger cavity or barrel to carry them, and so the bones are moulded to fit the organs, not the organs to fit the bones, so also the smaller vital organs of the ass require but a smaller and flatter cavity, and so also the bones are moulded to fit them. Many of you have perhaps heard of Lord Morton's curious experiment with the Quagga; he put a Quagga stallion to a thorough-bred chesnut mare, and the produce was a quagga mule, with stripes, and many characteristics of the male. The next season he put the mare to a black Arab horse, and to the astonishment of his lordship, she produced a foal bearing strong marks of the quagga, and this effect was visible for three generations from a blood stallion. There is a similar case recorded in the transactions of the Royal Society, where a mare of Sir George Ousley's was put to a Zebra, and the produce was striped like the sire; and she was next year served by a blood horse, and the foal had the zebra stripes, and the same result again followed the next year. It therefore would appear that a female once impregnated retains certain traces of the male, which remains by her for an undefined period. Now I have taken some pains to follow this out, and in the Zoological Gardens, from that most intelligent curator, Mr. Bartlett, I find this in the main correct. He showed me a white Spanish ass, with a few dark spots on him, and he had all the outward characteristics of our male ass in this country, except as to colour; and they have put him to several ponies, and in every case the produce was a modified ass; but he seemed to have exercised but small influence as to colour. There is one very amusing fact with this asinine gentleman—that since he has had pony mares he will have nothing whatever to do with his own tribe. Mr. Bartlett says they have tried mares with the male zebra in the establishment, and he is so ferocious and savage that he has nearly killed them, and they have ceased to try them. It is said, and I believe truly, that mules do not breed; but it may not be generally known that male and female mules have sexual intercourse, and Mr. Bartlett, however, thinks some day he shall find they will breed. I have seen some extraordinary instances of external appearances, especially of the locomotive powers following the male, and will give you one of my own experience. I once rode a very good hunting mare got by a thorough-bred horse named Maple. He had a sort of club fore-foot, and was lame with it; my mare had upright coronets of the fore feet more like donkeys, and she eventually went lame with them. Some years afterwards I saw a chesnut mare with a foal by her side going to Baron Rothschild's horse Hungerford. She was very lame, swinging her off fore-leg. I found she had a large bumble-foot, and on inquiry heard she was got by Maple. I have since made inquiries, and discovered that most of his progeny had peculiarly formed upright fore-feet, and many went lame there. I also remember a very good stallion called Uncommon. I believe he was own brother to Jericho, belonging to Lord Lonsdale, and who covered in our neighbourhood. He had a peculiar action of dishing or swinging his off fore-foot outwards when going fast, either trotting or galloping, and nearly all his descendants, whatever mares were sent to him, did the same. It was well known to all our neighbourhood, who used to say, if they saw one of his stock along the road, "Here comes an 'Uncommon.'" Mr. Finlay Dun wrote one of the most interesting and able papers I ever perused on "Breeding," which he read at the Midland Farmers' Club last year. Mr. Dun, in that lucid and forcible style for which he is so noted, goes very fully into all these questions, and—I shall have several times to quote him—says, that "not only do the parents transmit to their offspring their own external configuration, they also mould the various internal organs, and implant the particular habits and temperaments; all are equally

transmissible." He then goes on to state, with regard to horses, how persistently does the blaze on the face, or white legs, reappear in each generation. He mentions a case of a celebrated cart stallion in Leicestershire, where three-fourths of his stock have white leg markings, and that in one of the best horse-breeding counties in England. "There is at the present time a yellow bay cart-horse, which has been repeatedly made up for showing, has gained various county premiums, and has thus acquired a local celebrity in spite of his narrow chest, his weak loins, and his round, rough, greasy legs. For several years this brute has procreated a large number of faulty foals; many are produced with deformed heads and crooked spines. From false presentations, many mares put to him die; some of his colts, when dropped, are unable to stale or dung, and oftentimes their urachus is imperfectly closed. Those that survive for a few weeks frequently have scrofulous abscesses about the joints. More than one-third of his foals die before they are six months old, the residue are rickety, delicate, ill-thriven, and will not pay for rearing." These are the forcible remarks of Mr. Finlay Dun, and I am sure many of my hearers can assert pretty much the same of many stallions in their locality. But do not let us give the whole discredit to the stallion. Look at the wretched mares that are constantly put to the horses travelling the country. Any broken down weed, or lame old cart mare, is deemed in many cases good enough to breed from; and one of the most fertile sources of badly-bred horses is to be found in the mistaken kindness of many landowners and gentry in a neighbourhood who keep horses for the use of their tenantry, free of cost. Let them by all means keep horses for use, but by making a charge for the mares, I feel sure there would be fewer useless brutes sent to them to continue the flood of unsound animals that are generally to be found in the country. This brings me to the breeding of horned stock, and here my subject opens out so widely that I fear I must somewhat trespass on your patience, and ask you to bear with me whilst I again call your attention to my first proposition as to the influence of the male. The great and distinguished lines of blood—the Bates, the Booth, and the Knightleys—having each their followers, sometimes in their distinctive purity, sometimes in their judicious crossings, are each and all striving to attain perfection; and in that noble rivalry, I cannot call it a *bloodless* one, are all doing great service to the nation in their efforts to improve the meat-producing animals, not only of England and her colonies, but the world, for all come here for blood; whilst the colonies, hoping to add to their own pecuniary resources, are helping to swell the wealth of the nation. It is certainly remarkable to observe the external peculiarities of each of these tribes, and the initiated and those most interested well know the noble carriage and grandeur of outline of the Bates tribe; the heavily-fleshed, rich-haired character of the Booths and the lovely sweetness of countenance, the fine shoulders, and deep milking peculiarities of the Knightleys. There are many instances recorded as to home stock, in which the influence of the male was felt through many generations. That of the bull Hubback (319) for instance, and also of Favourite (252), whose peculiarities of quality and style are found to the present day. In our own times let us take Earl of Dublin (10178); the late Mr. J. C. Adkins, of Milcote, used him in his noted herd, where he did great service, and then sold him to Sir C. Knightley, where he did even more distinguished service than in Mr. Adkins' herd. Here was an extraordinary instance of his impressing deep in-milking qualities on his stock, which was an *internal* organization; but on looking to his pedigree you will find he was descended over and over again from the renowned milker Princess through almost every sire and dam in his pedigree, who were all noted milkers. And again, being used on a herd of noted milking qualities like the Knightley, it was not to be wondered at that his stock to this day are amongst the most prolific and deepest milkers we have. In reference to this point I will quote Mr. Darwin, who in vol. 2 of "Animals and Plants under Domestication," chapter 12—on "Inheritance"—says: "What can be more wonderful than that same triling peculiarity, not primordially attached to the species, should be transmitted through the male and female sexual cells, which are so minute as not to be visible to the naked eye, and afterwards through the incessant changes of a long course of development, undergone either in the

womb or in the egg, and ultimately appear in the offspring when mature, or even when quite old, as in the case of certain diseases? or again, what can be more wonderful than the well ascertained fact that the minute ovule of a good milking cow will produce a male, from whom a cell, in union with an ovule, will produce a female, and she, when mature, will have large mammary glands, yielding an abundant supply of milk, and even milk of a particular quality? Nevertheless, the real subject of surprise is, as Sir H. Holland has well remarked, not that a character should be inherited, but that *any should even fail of being inherited.*" 7th Duke of York (17754) also has left his mark unmistakably in the case of every cow he touched; and whether it was a pure Duchess, a Florentia, an Ursula, a Gazelle, or any others of the various tribes put to him, the progeny of one and all, in external appearances, were improved by him. The same thing I am told was the case with Prince Alfred, Commander-in-Chief (21451), and some others of the noted herds of Booth fame. On my visit to those extraordinary sales, conducted by our old friend Mr. Strafford, in the north of England last September, when at Mr. J. P. Foster's, at Killhow, in Cumberland, I was much struck with the beauty of all the young stock—their grand style, fine touch, and rich hair and colour, and on reference to my catalogue, I found they were all by his bull Duke of Oxford 17th (25994); it did not matter on what he was used, the progeny were all improved, strains of blood the most opposite, and oftentimes fully mixed, yet all were good. When also at Colonel Gunter's, at Wetherly, some two years ago, the impress of Fourth Duke of Thorndale was remarkable. But this opens up a very abstruse and interesting branch of the question—that of "*Prepotency*," or the overpowering influence of one or other of the sexes. Mr. Finlay Dun says it is mostly developed in the males, "and amongst horses, some of the best thorough-bred families are remarkably prepotent." Everyone conversant with racing stock must admit the prepotency of Eclipse, and of Stockwell, and I would add King Tom. Shorthorns, amongst cattle tribes, are notably prepotent, and crossed with Herefords, or Longhorns, speedily wipe out, as it were, their specialities. Favourite, Duke of Northumberland, Duke of Gloucester, Seventh Duke of York, and Earl of Dublin, are examples of Shorthorn sires, which, judged by the uniform character of their progeny, possessed unusual prepotent powers. The ass is stated to be prepotent over the horse, and the jackal over the dog, and the best of the Down sheep appear superior in prepotency to the white-faced sorts." I myself used a bull, Hardicanute (26638), bred by the late Mr. J. C. Adkins, who was particularly prepotent. Seraphinas and Knightleys were all fully impressed by him, and his fine touch and quality were perceptible in all. Mr. Thos. Booth, of renowned Warblay fame, writes to me, that "there can be no doubt, as a rule, that the male exerts a preponderating influence as far as the general formation of the animal goes, and this may be traced through many generations: hence the value of pure blood, from whatever strain, for wherever a bull has been introduced into a herd, or a pedigree, and has left an inferior mark on his stock, that pedigree has been depreciated in value at future sales. There can also be no doubt that the founders of the breed of Shorthorns improved their stock in a great measure by the selection of sires; and as some sires became more and more closely connected by in-and-in breeding, so they were more and more certain of like begetting like. I am certain that with many breeders of the present day all principles of selection on account of form and character are lost sight of and made to give way to pedigree only. This may ultimately prove injurious to Shorthorns by losing what our forefathers tried to effect, viz., to produce the greatest quantity of good meat with the least of offal." After some other observations, Mr. Booth says, "You will gather from these few remarks that I am strongly impressed with the necessity of having a *first-rate sire*—I don't altogether mean a *price* animal—for the improvement of a herd, because I know that such a sire will almost invariably leave his mark, and certain points may at times be traced back for three or four generations." These remarks, coming from so distinguished an authority, add great weight to the broad proposition I set out with. There is a very remarkable instance of impress by the theory of natural selection in the case of the noted wild cattle in Chillingham

Park, which was communicated to me by Mr. Jacob Wilson. He says that "at present the herd numbers sixty-seven head, and that the herd has been kept up by *in-and-in* breeding for several centuries—of course, the master bull always serving the cows." You will see here that the strongest male continually asserting his prowess keeps up the vigour of the herd, and when another stronger animal rises up amongst them, he in his turn becomes "Lord Paramount," and, as old age comes on, gives way again to his successor. In the *St. James' Magazine* lately was an account given by a lady of a battle for the mastery of the bulls, which, from the cleverness of its description, I cannot forbear giving: "There is always danger in meeting a *sulky* bull, that is, a bull banished from the herd, and literally sent to *Coventry*. The way this is affected is that the younger bull, after walking round the herd, stands ready to meet any comer. Then the elder bull, stepping forth from his harem, answers the challenge, and advancing step by step, the rivals meet, and the battle rages furious and strong, the herd standing by variously excited. One or two bulls, apparently acting as self-constituted umpires, are watching with heaving flanks and foam-stained lips the chances of war. Thus the fight goes on, amidst growls of rage, clouds of turf and dust, and the sudden heavy crash as the thick foreheads meet. Presently one of the combatants falters, then the fight is decided; for upon the first symptoms of weakness the umpire, rushing in, bears down upon the faltering bull, and completing the work with his fresh strength literally bowls him over. As the vanquished struggles to his feet, blinded by blood and crippled by furious blows, the herd comes upon him, and overwhelmed by numbers he is driven forth disgraced, discarded and beaten, to hide in the forest and brae-ens, until his wounds being healed he comes forth to seek revenge in another combat." But perhaps the most extraordinary instance of the influence of the male as to externals is to be found in a trial of my own with the Bramah and Dorking fowls. After reading Mr. Orton's paper, in which he recorded his trials with the Cochin and Dorking, I began with the Bramah and Dorking. The uninitiated of my listeners must understand that the Bramah has four claws only, has feathered legs, lays a buff-coloured egg, and the cock crows or roars like the Cochin; and that the Dorking has five claws on each foot, has no feathers on its legs, lays a white egg; and the cocks crow with the old English shrill clarion note. I put a Bramah cock to some Dorking hens, and the chickens almost invariably had four claws on each foot, in some instances five on one and four on another, and the pullets from these laid white eggs, and, most remarkable of all, the cockerels crowed like the Dorking, but they had small combs and had all the external appearance of the Bramah. Now, in putting the Dorking cock to the Bramah hens it was reversed in an extraordinary degree, for nearly all the chickens had five claws and the pullets laid buff eggs, in all these instances showing unmistakably that the externals followed the male, and that the internal organization, *i.e.* egg laying and the crowing, which was from the internal organisation of the throat, followed the female. A most singular case also occurred about four years ago. Amongst my Aylesbury ducks a Rouen drake got mixed with them for only one night, and one of the white Aylesburies subsequently produced one or two coloured ducklings; she was, therefore, carefully put away, but as she was one of my best and purest strains, she was bred from the next year, and she every now and then threw out a duckling with partially brown plumage. The next year she was tried again, and although for two years she had never been near a Rouen drake, she continued to breed an occasional duckling with a few discoloured feathers: here was one of those strange occurrences which we shall have to consider more deeply before we close the subject. The Rev. Mr. Smythies told me that he bred a chicken from a game hen by a Dorking cock, and that one leg had five claws and was white in colour, and the other leg was yellow and had but four claws; this was a strange combination. In speaking of turkeys, perhaps it is not generally known that one fecundation by the cock bird is sufficient to fertilise all the ovary of the hen. I have myself had a hen turkey sent away to a neighbouring farm to a cock bird, and she has never been near one again, and yet every egg was fertile; and, still more remarkable, after bringing up the brood, she laid again, and although never having been to the male bird since the first time, the new laying of eggs was also fertile; here we have a remarkable instance of the impress

of the male beyond one generation; many such can be adduced; and Darwin, through repeated trials with pigeons, shows the same results. There are, however, many singular cases where the influence of the female has been prepotent even in externals, or where she has exercised extraordinary influence, through either the imagination or some other cause inexplicable. Mr. Savidge, of Oxfordshire, whose veracity is unimpeachable, tells me that on one occasion when he lived with the late Mr. Langston, of Sarsden, that a neighbour sent a pure Shorthorn heifer to one of their purely-bred bulls, and as she was difficult to drive they sent an Alderney cow to accompany her, and he (Mr. Savidge) remonstrated with the man for doing it, and said the heifer would be sure to have an Alderney-coloured calf. She was served by the bull, and the produce was to all intents like an Alderney both in colour of nose and general appearance. I have the following from the same gentleman. The late Lord Ducie, who was particularly noted for his breed of pure white pigs, as was also Mr. Langston, gave Mr. Langston, a very celebrated white boar who had gotten some of his lordships best pigs, Mr. Langston put him to his best white sows, and they produced him some first class white pigs, but Mr. Langston in his kindness permitted his tenants and cottagers to send sows to this boar, many of which were Berkshires and other black sorts. From that time he began to get black and spotted pigs from the pure bred white sows to which he had been previously put. Now here was a case of imagination on the part of the male, if such a thing could happen. I have also an interesting letter from Mr. Smith, of Henley in Arden, one of our most celebrated Berkshire breeders, who says: "I always notice that the male transmits the greatest external influence to the young ones, but very seldom continued beyond the second generation, in colour. When I first began breeding, sixteen years ago, I used to let my neighbours send sows to my Berkshire boars, and many instances occurred where the produce have been all the colour of the boars, good-looking Berkshires. For the last ten years I have never let any sows but my own pure Berkshires be served by my boars. I have always found the influence of the female in the internal organisation very great as to transmission of fecundity, milking powers, and constitution, to all her offspring." He then states the following fact: "Some years ago I had a very favourite sow that had bred me six farrows of pigs, and most of them had taken prizes; she then refused to breed after being sent to every Berkshire boar I could send her to. I then put her to her own son. The produce were half cripples, the hind feet being in the place of the fore ones. She afterwards bred me six more farrows, the last one of twelve pigs, the best she ever bred." And Mr. E. Duckering, of Kirton Lindsey, the noted breeder of white pigs, writes to me thus: "I have even found symmetry depends much on the male animal; I would, therefore, have him of as perfect form as possible, displaying all the points of his race;" and he also states that occasionally neighbours send a Berkshire sow to his white boars, and "the produce has invariably been all white." I have also an interesting letter from the Rev. Mr. Storer, of Hellidon, of Shorthorn notoriety he considers that the broad proposition with which I started is the Scotch verdict "Not proven;" but that "external peculiarities are often transmitted by the male through many successive generations; and where not strictly transmitted, they have reappeared after remaining in abeyance; but my experience does not lead me to think such power of external peculiarities is confined to the male animal. I conceive that all depends upon which of the two is more 'prepotent.' "As an example," he says, "I saw a few years since at a farmers in Notts, a Shorthorn roan heifer with a large black spot on the thigh, and corresponding with a black bar across the tail, and was informed that she was descended from a cow of Mr. Burgess's, six generations back, which cow had an exactly similar blemish." This was a case of reversion or atavism. With regard to colour "in many cases," he says "the calf is more likely to derive its colour from one or other of its grand parents, than from either of its parents." Mr. Duckham, of Herefordshire, in speaking of that grand tribe of cattle for which his country is so famed, says: "I think the male animal has great external influence upon his offspring, both in character and general outline. The use of a bull with horns of an upward tendency, or what are called 'Cock horned,' will display itself in the offspring for many generations, and is difficult to eradicate, and so with a hard skin and coarse wirey hair." With

regard to colour, a polled Angus has been tried with the Herefords, and every calf had a white face, and white marks upon the underside of the body. Mr. Charles Howard, of Biddenham, also expresses his entire concurrence in the theory and remarks upon the influence of the female as to milk: "You have only to go to that strain of blood which you patronize so strongly, viz., Sir Charles Knightley, for confirmation." As to colour, the influence of the male was felt in a remarkable degree in the Bates and Booth bull, May Duke (18320). He got some of the worst colours I ever saw. I think the same principle as to the influence of the male holds with sheep. With regard to sheep, it is well known how a ram influences the external characteristics of a flock. The Oxfordshire Downs, which now rank as an established breed, were produced about the year 1830 by crossing Hampshire or South-down ewes with the Cotswold ram; and despite the assertion to the contrary, I know the greatest difficulty is experienced in keeping up the leading characteristics of the breed. Here we find the male leaving behind in his progeny size and wonderful external appearance; and thickness of lean and closeness of grain of meat, being an internal production, following the female. As an instance of remarkable careful selection, and thus keeping a breed of sheep pure, nothing can surpass the late Mr. Valentine Barford's flock. Here, for nearly fifty years, he never bought a ram, but selected the best of the best every year, and produced a flock which for evenness of character and perfection of shape has, perhaps, never been surpassed. Another eminent example of this practice was the late Mr. Jonas Webb with his Southdowns. Darwin mentions the case of the Ancon sheep as a very curious instance. He says they were first reared in Massachusetts, a ram having been accidentally born with short crooked legs and a long back. It was soon multiplied, and raised into a new stock, known by the name of the "Ancon breed." We therefore see from the number of facts which have been produced that the proposition I first laid down, that the male chiefly exercises the external and the female the internal organization, is in the main correct. If I choose to carry on this paper farther I should tire your patience, and could say no more than I have already said. We have seen how the principal acts with the horse and the ass, in horned stock, with sheep and pigs, and also in numberless cases of poultry. I admit there are many weak points in my armour, and which will probably be found out by the practical and scientific men I see around me. But let us see if we cannot apply these facts, and try and form principles to guide us in our attempts to improve the live stock of this country. In our horses let us look well to the stallion—that he has good carriage, fine action, speed, and good colour; that our mares have strong constitution, free from all constitutional blemishes, strong in wind, and great power of endurance—above all, good tempers. With our sheep—that our tups shall have strong limbs, thick serags, broad loins, good length, and good heads and ears. That the ewes have good fleeces, whichever we go in for (Long, Short, or Lustre wool); broad chests, showing strong internal structure, good milking qualities, and disinclination to roam about in our southern districts, and good foraging powers on hill and mountain sides. That our boars should be powerful, with good hair, and plenty of it; short headed, and good loins; bodies straight and long, with short legs, and fine bone. Our sows quiet, feminine looking, great motherly instinct, great fecundity, with full milking powers, and great aptitude to fatten. That our bulls should be of noble bearing, with grand masculine heads: fine crests, well covered with good hair; fine carriage, strong hind legs, good girth, well sprung ribs, and strong loins. The cows quiet, lazy, good-tempered creatures, with deep bosoms, great milkers (the most essential of all), lovely sweet heads—well expressed as Knightley. These would be general characteristics, but we must be careful of external associations. I feel sure that a herd of valuable Shorthorns ought never to have a Polled Scot, an Alderney, or any but their own breed with them, and if we are to believe the statements we have heard, even the external surroundings must be attended to. Mr. McCombie, I am assured, has all his buildings, his gates, gateways, and everything about his farm black, so that no imagination shall disturb his black Polled Scots. I have heard that a certain lady, of well-deserved and well-known Shorthorn fame, had wondered at the preponderance of white calves which was bred in her establishment, and that the roans year by year were getting lighter; and it was suggested

that her annual practice of line and white-washing her buildings should be discontinued. She did so, and very soon her ladyship's cows had fewer white calves, and the roans got darker. Whether it be imagination or not I will not pretend to say; but I state the facts, and out of them perhaps the principles may be determined. We have also seen how "prepotent" some animals are over others, and I am almost inclined to think with Mr. Storer that oftentimes the female, when very vigorous, is prepotent over the male even in externals; but this has been probably inherited in former generations from the male. I have studiously avoided alluding to the human race; but I cannot forbear mentioning as an illustration the well-known fact that the long upper lip of the imperial house of Austria was said to have been inherited from the marriage of the Emperor Maximilian with Mary of Burgundy; and in a well-known dual house of this country the prominent, finely arched nose has been inherited for several centuries both through the male and the female lines. There is one other circumstance that ought to receive consideration—that is, the influence of food and climate in modifying species. The Rev. Mr. Titcombe, in the reports of the Victoria Institute, says, in speaking of the origin of the negro that "the action of food and climate exercises great influence in modifying size, colour, and even structure. In food it is well known, that hemp-seed given to birds of the finch tribe, will turn them black. Rich and plentiful food, when given to young swine, directly tends to make their heads broader and shorter, whereas poor food works a contrary result; horses fed on fat marshy grounds, grow to a large size; while on strong soils or dry heaths, they remain small." And I therefore think if a man leaves the district to which he has been accustomed, and takes a farm in another county, he should fully study the class of animals bred in that district, before he brings away with him his own pre-conceived ideas. Generally speaking, the breeds which have become indigenous to a district are generally the most suitable. There are, of course, some notable exceptions. I believe the Shorthorns will adapt themselves to every part of the three kingdoms, and have proved themselves capable of living in almost every climate in the world. The Berkshire pig too seems to thrive anywhere. The Leicester sheep fails in many localities; and the Sussex Downs in many districts of England are comparative failures, and I believe the Suffolk horses flourish nowhere but in the Eastern Counties. There are also many parts of England where the Dorking fowl cannot be reared to advantage, and there is no doubt that the early maturity and delicacy of colour of the Aylesbury duck rapidly deteriorates when removed from the neighbourhood of Aylesbury. My subject has such a tendency to branch off into so many lines, that I must bring my remarks speedily to a close. But do not let it be imagined that I have here shown how easily breeding a good class of animals is. Successful breeding requires the greatest possible care, skill, and attention, and to obtain marked success, every minutie must be attended to. Darwin says, p. 3, Vol. II: "Some writers, who have not attended to natural history, have attempted to show that the force of inheritance has been much exaggerated. The breeders of animals would smile at such simplicity; and if they condescend to make any answer, might ask what would be the chance of winning a prize if two inferior animals were paired together? They might ask whether the half wild Arabs, were led by theoretical notions to keep pedigrees of their horses. Why have pedigrees been scrupulously kept and published of blood-horses, of Shorthorn cattle, and more recently of the Hereford breed? Is it an illusion that these recently improved animals safely transmitted their excellent qualities even when crossed with other breeds? have the Shorthorns without good reason been purchased at immense prices, and exported to every quarter of the world, a thousand guineas having been given for a bull? With greyhounds, pedigrees have been kept for generations; and the names of such dogs as Snowball, Major, &c., are as well known to coursers as those of Eclipse or Herod on the turf. Even with the gamecock pedigrees of famous strains were formerly kept, and extended back for a century. With pigs, the Yorkshire and Cumberland breeders prepare and print pedigrees; and to show how such highly-bred animals are valued, I may mention that Mr. Brown, who won all the first prizes for small breeds at Birmingham in 1850—sold a young sow and boar of his breed to Lord Ducie, for 43

guineas; the sow alone was afterwards sold to the Rev. F. Thursby for 63 guineas; who writes, 'she paid me very well, having sold her produce for £300, and showing now four breeding sows from her.' Hard cash paid down over and over again is an excellent test of inherited superiority. In fact the whole science and art of breeding, from which such great results have been attained during the present century, depends on the inheritance of each little detail of structure. But inheritance is not certain, for if it were, the breeder's art would be reduced to a certainty, and there would be no scope left for all that skill and perseverance shown by the men who have left an enduring monument of their success in the present state of our domesticated animals." Before I conclude I must say one word as to crossing. I have always observed a tendency to revert to one or both parents, which is very strong, and endures for many generations. In "Youatt on the Pig," Mr. Lindsay states that in a litter of Essex pigs two young ones appeared which were the image of the Berkshire boar that had been used twenty-eight years before in giving size and constitution to the breed; and Mr. Darwin also says that he observed, in a farm-yard at Betley Hall, some fowls showing a strong likeness to the Malay breed, and was told by Mr. Tollet that he had forty years before crossed his birds with Malays, and that he had often tried to get rid of this strain, but gave it up in despair, as the Malay character would reappear. I have now tired myself, and perhaps exhausted your patience, and trust that these disjointed opinions may open up an enlarged view of the subject, and that in the next two or three years some more able writer will be enabled to lay before the country a statement of results showing that this paper has not been written in vain, and that the discussion of this evening may stimulate the farmers of England, and the nobility and gentry who are amongst our most distinguished leaders in this most seductive art, to make experiments, for enlarged exertions to provide food for our ever increasing population; and whilst I have given you the opinions of many of our leading farmers on this subject, and see around me so many of them distinguished by their zeal and success in the cause, let us not forget that not only we, but many of the highest in the land, are our competitors, and from the liberal, yet judicious and useful way in which they spend their money for breeding purposes, we may one and all congratulate ourselves that they are fully alive to the importance of this subject.

MR. G. SMYTHIES (Marlow Lodge, Leintwardine) said Mr. Fowler in his admirable paper, speaking of the kind of animals which they should breed, had said more about form than anything else. As a breeder, he wished to say a word in favour of quality. What he meant by quality was an animal that would live in good condition on poor land, and lay on a large amount of flesh in proportion to its frame. He could easily believe that that would not be likely to enter into Mr. Fowler's head. On that gentleman's land quality seemed to be of no great importance, for he told them that the ducks which he produced got small when they went anywhere else (laughter). He (Mr. Smythies) came from a district where the grass was of middling quality, and unless they had animals of the class to which he alluded they could not breed at a profit. Let him illustrate what he meant by referring to last year's Smithfield Show. He did not say one word in disparagement of Shorthorns, when he expressed his belief that Herefords would live on poorer land than Shorthorns, that they did not ordinarily require as good grass, and could live on inferior land. There were three classes of bullocks exhibited; there were three prizes in each class; there were altogether nine animals that obtained prizes. Well, the nine prize animals among the Shorthorns did not weigh as much as the nine prize ones among the Herefords, and he said that was due to difference of quality. Although the Herefords would live on poor land they laid on a vast amount of flesh. The case was similar with regard to sheep. If there were any proud Salopians there who despised the crossing of their sheep with Southdowns, he would refer them to the magnificent pen of Lord Walsingham, which, though of small frame and capable of living on poor land, were heavier than any pen of Shropshires of the same age. He hoped his friends from Shropshire would bear that fact in mind. He knew there were many excellent breeders in Shropshire who did not admit that crossing with Southdowns was at all beneficial. He contended, however, that it would give quality, which was what

was wanted. He would impress upon every breeder that they must not depend altogether on frame, but must look to that quality which would lay on a great amount of flesh with a comparatively small amount of frame (Hear, hear).

MR. B. E. WARD (Drayton, Rockingham) said, although he was very much pleased with Mr. Fowler's paper as a whole, he could not at all concur in what he said about Leicestershire horses; and he could hardly conceive where he got his information. When he stated that he had bred horses and sold ten yearlings for £37 each, they must, he thought, feel that the thing could not be very unsatisfactory. Neither were they very unsuccessful as regarded sheep. As regarded the crossing of sheep every one must be aware that the second and third crossings were of no use at all; it was only the first crossing that was advantageous. On the whole he thought Leicestershire was not very badly represented either as regarded horses or sheep.

MR. J. HOWARD, M.P., said, seeing many distinguished breeders in that room, he felt that any observations which he might offer would have little weight compared with the expression of their opinions, he had not intended to speak; but as those gentlemen seemed reluctant to rise, he would make one or two remarks; he was quite sure that they all felt much indebted to Mr. Fowler for the pains which he had taken to bring before them in so suitable a manner a subject of such great importance, not only to the farmers of England, but also to the consuming public. If Mr. Fowler had not that evening enunciated any very new principle, his paper would be instrumental in diffusing information which was possessed by the few among the many (Hear, hear). The principles of breeding had been well known for many years to some distinguished breeders; but if they had been more generally diffused, and were more widely known, the many ill-shaped under-bred animals that met their eyes in almost every county of England would never have seen daylight (Hear, hear). Mr. Fowler commenced his paper by laying down the proposition that the male animal ruled the external organization, and that the internal organization came from the female. It was many years now since he first brought under Mr. Fowler's observation that principle; since then he (Mr. Howard) had narrowly observed in every part of the world he had visited the effect of that principle. In horses, in sheep, and in poultry, he had constantly found that the external organization came mainly from the male animal. To begin with horses, he had invariably noticed that in the breeding of both cart horses and blood horses the form took almost exclusively after the male. There were two well-known blood horses, especially known in the district to which Mr. Fowler belonged—Grandboro' and Wingrave, both sons of King Tom. He sent to Grandboro' a well-bred hunting mare, which was "highly commended" at the Royal Show, at Bury; he had a right to expect in the progeny a blood-looking horse; but, contrary to his expectations, the produce turned out a coarse-bred looking animal, although a good one. The next year the mare went to Wingrave; this foal looked like a thorough-bred, and at four years old was sold to a dealer for 200 guineas. These different results are to be accounted for, my Grandboro' being a thick under-bred-looking horse whilst his half-brother Wingrave is a most blood-looking one. Then, again, he had found that the feet came from the horse, and did not follow the mare. Having a mare which had flat feet, he had it put to a horse which had good feet, and the result was that her three foals had good feet. He mentioned this further to corroborate Mr. Fowler's proposition that the external organization came from the male. He had had, as most present were aware, considerable experience in the breeding of pigs, and with them also the same principle held good. With regard to colour, he believed that the male had generally much more to do with fixing the colour of the progeny than the female. Some years ago he went to see the Duke of Bedford's farm, managed at that time by Mr. Baker, whom he saw present; he had a herd of black pigs, upon which a white boar was used, and it was a remarkable fact that the young pigs all came white. Some years ago he (Mr. J. Howard) crossed a Berkshire sow with one of his white boars. The result was that the offspring all came white, and it was not till about the sixth generation that there was any deviation from that rule, when black spots appeared. During the last year, while residing for a time at Brighton, he went to visit Mr. Dumbrell, a well known member of that club, who had a very fine herd of

Alderney cows. On that occasion he saw a red Sussex bull among the herd, and on his noticing the fact, Mr. Dumbrell observed that the calves all came red. He never had an exception. The Alderney was unmistakably a breed purer, and with a longer pedigree than the Sussex, yet this did not suffice to counteract the influence of the male as to colour. With respect to poultry, he could confirm, from his own experience in crossing, Mr. Fowler's statement that the female ruled the colour of the egg laid by the progeny. Mr. McCombie, M.P. for Aberdeenshire, whose high reputation as a breeder of polled cattle was well known to every one, had told him that some years ago he had some red cattle near to his black polled herd, and that his calves from them occasionally came red; that he removed the red cattle, and that from that time a red calf was never dropped. He (Mr. J. Howard) thought that if the observations of large breeders were collected, farmers would be able to arrive at far more definite rules than at present existed in reference to the breeding of cattle, and breeding would not be so much a game of chance. It was well known that like begets like; but there were many failures for want of adequate knowledge in mating, and, in his opinion, if facts were collected and tabulated, that would lead to the establishment of a sound theory, and to great improvements in the practice of breeding.

Mr. T. CONGREVE (Peter Hall, Brinklow, Coventry) said Mr. Fowler had occupied himself chiefly with "principles," but he wished to make one or two observations on "facts." Although the Royal Agricultural Society of England had existed ever since 1835, and although it had held shows throughout the length and breadth of the land, and had offered liberal prizes to encourage the best breeds of animals, yet he was sorry to say the fact remained—he was now speaking as a grazier—that year by year it became more and more difficult to buy a lot of good beasts to graze. He hoped that the discussion of that evening would lead to something like established principles of breeding, so that the breeders might be able to lay out their money on more profitable descriptions of stock. Whether he desired to get Shorthorns, Herefords, Welsh runts, or any other kind of stock, he felt the difficulty to be increasing every year, and that certainly seemed extraordinary, considering the immense amount that was spent in prizes, and the vast amount of discussion that had taken place. Looking back to thirty years ago, he believed that graziers were now in a worse position in that respect than they were at that period. His friend Mr. Smythies, who was a Herefordshire man, would bear with him for saying that the Herefords were getting lighter, more gaudy, less deep in the thigh, less fleshy than they used to be. What graziers wanted was an animal that would carry some butcher's meat about it (laughter).

Mr. L. A. COUSSMAKER (Westwood, Guildford) said, although he had not been a very large breeder, he was fully sensible of the necessity of their all endeavouring to breed such animals as would answer the purpose best. There were different rules and different fashions, predisposing some people to one breed and some to another; but what they should all endeavour to arrive at was the breed of animals that, with good quality, would be most likely to attain early maturity. They would of course have gained a great point if they could secure two-year-olds which would be as forward as inferior breeds were at three years. Whatever the breed might be, it was by trying to get the best quality of animals that they were most likely to attain their object.

Mr. J. TREADWELL (Upper Winchendon, Aylesbury) believed that the reason why Mr. Congreve and other graziers had increased difficulty in getting hold of good beasts to graze, was, that many farmers had discovered that it was most profitable to fatten well-bred animals themselves (Hear, hear). He quite agreed with Mr. Fowler that like begets like. Some years ago he had a common herd of cows; at last he used a good Shorthorn bull, and the first time he did so the produce was influenced by it in a more marked manner than the second cross.

Mr. MECHE thought that increased and increasing deterioration of stock in this country was owing to false economy on the part of farmers. He had seen cases in which, rather than pay an extra half-crown, a farmer had ruined the progeny of a well-bred cow. But the mischief did not end there. The calf was sold, and it was almost impossible to trace the evil to the end. What it was necessary to infuse—and he believed Mr. Fowler's paper would help to infuse

it—was a general belief in the agricultural mind, that it was better to pay a little more at first than be saddled with an inferior kind of animal (Hear, hear). He was a believer in the influence of soil and climate upon race. They all knew perfectly well how those influences operated in the case of the human race. Parents who had families in India were obliged to send them home lest they should deteriorate. He even believed in the influence of soil and climate in this country. He recollected once having thirty Lincolnshire farmers to dine with him, and every one of them was at least 6 feet 2 inches in height (laughter). On the rich lands of Lincolnshire there were big horses, big oxen, big men (laughter), everything, in short, was big; and while he gave the Shorthorns credit for doing well in many places, he contended, that a proper quantity and quality of food must be administered to them. It was with animals generally as it was with the human race. It was a common saying, "Like father like son." If there happened to be a deformity in the father it would sometimes be found in his boys; and, on the other hand, he had known cases in which the children had not the slightest resemblance to the father, the mother having a strongly developed and marked character. He believed that it was quite impossible to take an animal from rich land and place him on poor land without his deteriorating in character.

Mr. H. M. JENKINS (Hanover-square) said there seemed to be on the part of many breeders present a desire to trace out principles with regard to breeding, and Mr. Howard had suggested as one means of accomplishing that object that facts should be tabulated. He hoped that if any gentleman should have enthusiasm enough to begin to tabulate facts he would take care to ascertain what was the relative value of each fact. Mr. Howard spoke of the influence of males, and Mr. Mechi had just led up to the same point. He (Mr. Jenkins) wished to throw out the suggestion that the prepotency of males, as naturalists termed it, was explained to a great extent by the fact that the weakly males were all castrated, and therefore only the strongest and most powerful males were used for the purpose of breeding.

Mr. H. TRETNEWY (Silsoe, Ampthill) said many ingenious theories had been raised with regard to breeding as well as on other subjects; but he questioned very much whether they knew a great deal about it yet. It had been laid down by many authorities that the external organization came from the male, and the temper and constitution generally from the female. That view might to some extent be correct, but he doubted whether it was invariably so. How many of them, for instance, had found mares which had been put to different horses having foals more like themselves than like the sire? and it was frequently found that diseases were propagated at least as much by the mare as by the horse. If they all knew really how to deal with such cases there would be no difficulty in breeding; but the thing seemed to him altogether a mystery. He believed that in some classes of animals the male had greater influence than in others. He thought that a flock of sheep was more influenced by the ram than the breed of horses was influenced by the stallion. Perhaps mares had a greater influence in transmitting their own qualities to their offspring than any other female animals. Having had some experience in the breeding of horses, cattle, and sheep, he had observed that the sympathy of the mare was peculiarly great. He well remembered a case in which a friend of his had an Irish colt with peculiarly-marked white legs and white forehead, and had also an old bay mare. The mare was sent to Bay Middleton; the groom who took her rode the chestnut, and the foal was as much like the chestnut as possible. That was a strong illustration of the sympathy of mares. Animals frequently "sported" in breeding; that is, they went on very well for two or three generations, and then changed their character. Thirty or forty years ago his father bought a very good sheep in Devonshire; but as it had a black foot it was blown upon, but his father had a good opinion of it. The black foot never appeared, however, till about twenty years after. He agreed with a preceding speaker that many farmers were a great deal too indifferent about the kind of animal which they used for breeding purposes. Whether it were a horse or a mare, a bull or a cow, they were too much influenced by the consideration of cost, forgetting the consideration of the character of the produce; and in his opinion that was an evil which was greatly to be deplored.

Mr. ALLD (Worsley, Manchester) thought they were very much indebted to Mr. Fowler for his excellent remarks on the principles of breeding. As to the influence of the female, they all remembered what was said in the Bible about Jacob (Hear, hear). In his own experience of dairy stock he had learnt that if they wished to have a good dairy the grand point was to get a cow which was produced by a bull that had a good milking mother. As regarded the complaint which had been made that evening of the difficulty of buying grazing stock, it seemed to him to arise from the fact that farmers were getting rather more wisdom on that point than they once had, and liked to sell their stock mature on the fat.

Mr. W. HARPER (Bury, Lancashire) said he could not help expressing his regret that no one had alluded in that discussion to the great name of Bakewell while speaking of breeding. It was asserted that Mr. Bakewell, who made up his Leicester sheep from a variety of sources, introduced a black ram of very superior quality, which he bought at Ashbourne market, in Derbyshire, and on that account it was said that the breed occasionally threw a black lamb.

Mr. E. TATTERSALL said it would be presumptuous in him to enter into a discussion on the breeding of cattle in the presence of so many eminent breeders, but as the man who made two blades of grass grow where only one grew before did good to his country, so did he who made two bullocks grow instead of one, or one of better quality. From some of the speeches a stranger who had come there might have been led to suppose that the agriculturists of the present day knew scarcely anything about breeding (Hear, hear)—that they had in that respect almost gone back to the dark ages, when the science of breeding was unknown. He had, in his ignorance and simplicity, fancied that this was a great breeding country, and that farmers knew something about the matter; but it now appeared that they were all going the wrong way. He thought, however, that he knew some facts which tended to the opposite conclusion. He happened to live on an estate belonging to Capt. Gunter, and he believed that in the last year that gentleman actually sold two Shorthorns for 2,500 guineas. But that was not all. Lord Dunmore, being anxious to secure and perpetuate the breed, sent to America and gave 2,500gs. for their two calves, and brought them back to England. This did not look like our breed deteriorating in value, taking £ s. d. as the test (Hear, hear). His (Mr. Tattersall's) grandfather was a great breeder of Southdown sheep; at seven or eight years of age he had often to go among the sheep pens, and he must say that he had not lately noticed that deterioration of breed which some gentlemen seemed to have found; on the contrary he thought they were advancing, though not, perhaps, quite as rapidly as they might do. It was most important that all those who were engaged in breeding should regard it as a science, which it certainly was. The whole science depended, Mr. Fowler had well pointed out, on the constant seeking out of good qualities in the male and female. The sympathies of the dam had been well understood from the time of Jacob down to the present day. There was nothing new under the sun, and Jacob knew as much on that point as any of them. He concurred, however, in the opinion that it would be a great advantage if the chief facts connected with breeding were collected and tabulated. He thought the breeding of cattle was, on the whole, being carried on very satisfactorily by the farmers of England, their attention being naturally directed to the production of meat. With regard to horses, Mr. Howard had raised a question of very great interest. Whether the influence of the father or that of the mother, were the greatest in the case of a thorough-bred horse he (Mr. Tattersall) was unable to say, but there were many cases in which he knew at once that yearlings were by certain sires. Mr. Howard mentioned a case in which a mare of his was sent to Grandborough and then to Wingrave, and both those animals being sons of King Tom, in the one case the result was a coarse animal, and in the other a very fine one. That might be explained in this way; King Tom was the son of Pocahontas by Glencoe, a powerful animal which never won a race, but bred Stockwell, Rataplan, and lastly King Tom. Pocahontas was a large big-boned mare, which looked much more like a hunter than a race-horse, and impressed her qualities on her progeny. Grandborough might throw back more to Harkaway, the sire of King Tom. The influence of sex had shown itself in different ways, through the medium of

the two horses. In the breeding of cattle and sheep the qualifications requisite for the attainment of the end in view might not be such as would secure a good race-horse. No one could tell by looking at a foal what would be the result. His experience with regard to race-horses showed that if they once chanced to get a really good mare care should be taken to continue the stock. Most great studs had arisen from one mare. General Peel's stud came from Vulture; Sir Joseph Hawley's stud, which was equally celebrated, came from Mendicant, winner of the Oaks, the dam of Beadsman, the sire of Bluegown and Rosicrucian. Mr. Panson had the good luck to buy in Scotland a mare named Queen Mary, from whom were descended Blink Bonny, and her son Blair Athol by Stockwell. Colonel Pearson's stud was descended from Paradigm—a moderate mare, but the dam of Lord Lyon and Achievement. Whether the influence of the sire or of the female had the greatest effect in the case of racing studs it was difficult to say. All such questions, which were questions of great moment, could only be worked out by scientific heads like those which he saw before him, and he thought the Club was greatly indebted to Mr. Fowler for having introduced a question which was of so much importance to agriculturists, more especially as they were certain that corn might be cheap, but meat never again in England.

Mr. TRASK (Orcheston, Devizes) said he merely wished to mention two facts that had come under his own observation. Mr. Fowler had said that where a white boar had served only white sows, the produce were invariably white; but after the same boar had served coloured sows, he got coloured pigs from the same white sows that before had only white pigs. He did not think this principle would apply in the case of sheep, although Mr. Fowler said it did with his white ducks. It was usual to put a Down ram with horn sale ewes, and he had put a Leicester ram with horn ewes, but those ewes would produce as pure horn lambs as ever, when again put to a horn ram. With regard to the point alluded to by Mr. Howard, that the feet of a foal always turned after a stallion. A neighbour of his put a cart mare, that had ringbones, to horse, and the result was that the foal also had ringbones, showing that it turned after the mother, and not the father in that case.

Mr. THORNTON (Langham Place) said there was one point connected with in-and-in breeding which Mr. Fowler somewhat overlooked, having special reference to Shorthorns. There were at the present time four fashionable tribes of cattle which command the highest prices, and these tribes, especially the two most in demand (Bates and Booth), were singularly closely bred. The most successful lines were those in which one animal was the sire of the sire and of the dam also—that is to say, half brother and sister by the same sire out of different dams. This system of breeding had produced some of the finest cattle in the country, and he believed had also been successfully tried in some cases with race horses. Where cattle were closely in-bred and preserved their constitutions, they had a tendency to lose colour, save perhaps in the ears, and to become white. The wild cattle of Chillingham were white. As another instance in pure bred Shorthorns, the bull Earl of Dublin, to which Mr. Fowler had alluded, was white, and extremely closely bred from the Princess blood. Seventh Duke of York, the last purely bred bull of the Duchess tribe, was white, and Eighth Duke of York, the bull nearest approaching Seventh Duke of York in pedigree, was white also. Many of Mr. Booth's cattle were white; Windsor, to wit, and Commander-in-Chief, a comparatively light roan bull, has begotten several white calves. In seeking pedigree bulls, quality was too often overlooked, and it was owing to that cause and the insufficient number of animals bred in the country, that it was so difficult to find good graziers.

Mr. JOHN THOMAS (Bletsoe, Beds) said as regarded horses he was a believer in Shropshire breeds. Forty years ago there was a good breed of useful hackneys: now the race of hacknies was almost extinct. That was a class of horses which he should like to see rising up again in this country, but he knew there was great difficulty in securing that object. At the period to which he had alluded the Shropshire farmers had a very good race of mares; but unfortunately they sold their good mares and afterwards bred from weeds, and the result was that the breed of horses was reduced to a very low condition indeed. His own experience—and he had been a breeder of horses for some years—had led him to the conclusion that a vast deal depended on the female. No man of common

sense who had a good mare would put it to a bad house; but after all the result depended in a very great degree on the mare. That principle was distinctly laid down by the late Mr. W. Youatt, who had been regarded as a great authority on that subject. He was inclined to think that without good marsh land for horses to feed upon it was impossible to secure animals of a large size and good quality. Where the land was poor it was vain to expect to rear horses of the same dimensions and quality as those which were produced in Lincolnshire, Ireland, and other parts which were known to be adapted for first-class hunters and other classes of animals (Hear, hear).

The CHAIRMAN said the time had now arrived when it was necessary to bring that discussion to a close. He was sure that all felt very much obliged to Mr. Fowler for the paper which he had read. To him it appeared a very satisfactory arrangement that the Club did not pass any resolution or formally arrive at any definite conclusion on the various questions which were discussed; for many of the papers which were read and of the discussions which followed the reading acquired increased value when they were read and thought over at home. He attached great importance to the consideration of that subject.

Mr. BADDAM, with the permission of the chairman, said, in opposition to the opinion of Mr. Fowler, as to Suffolk horses not flourishing anywhere except in the eastern counties, that Americans had lately offered 200 guineas for a two-year-old colt.

Mr. FOWLER in reply said he thought the discussion had tended to show that the principles which he had laid down with regard to breeding were in the main sound. Mr. Smythies was quite mistaken if he supposed that he did not attach great importance to quality. He held in his hand a letter which he had received from a gentleman who was well known in that Club—Mr. Clare Sewell Read. That gentleman, after expressing his regret that an attack of bronchitis would prevent him from being present on that occasion, said:

"I hope you will drive into your hearers the fact that the more ordinary the dam the greater the necessity for a *long-pedigreed sire*, and I know of no better illustration than the Irish cattle, which in twenty years, from the use of good Short-horn bulls, have been transformed from lean, hard, hungry brutes into capital grazing oxen." He (Mr. Fowler) thought that contained as good a condensed description of the best breeds of oxen in the present day as he had ever met with. He thought they must all concur in Mr. Meehi's remark with regard to the false economy often practised in the use of male animals. In his neighbourhood a large number of females were put to bulls of an inferior description, and the progeny sold as calves; and when such was the case it was no wonder that so many mongrels were turned into the fields. The evil was so great that he almost thought a Royal Commission should be issued to investigate the matter, and for his own part he would in every parish have every brute castrated that was not fit to produce a good race of animals. In the *Daily Telegraph* there appeared the following: "One of our best agricultural writers tells us that modern history has been much too sparing of its prose pictures of pastoral life. A great general or statesman has never lacked a biographer; but the thoughts and labours of men who silently build up an improved race of sheep or cattle, of which the influence is felt in every market, have for the most part no adequate record. It cannot be otherwise than advantageous to a country so thickly settled as these islands, that our noblemen and gentlemen of wealth and leisure should bestow money and brains in abundance in the creation of beef." It was well remarked by Mr. Grant Duff—not the present possessor of that name, but his father or grand father—that a good beast was a good beast, however it may have come, but it was to pedigrees alone that you could insure succession.

On the motion of Mr. Meehi thanks were voted to Mr. Fowler for his paper, and a similar acknowledgment was made to the chairman.

THE SCOTTISH CHAMBER OF AGRICULTURE.

LAND TENURE AND THE LAND LAWS.

At a general meeting in Edinburgh, the president, Mr. Smith, West Drums, Forfarshire, was in the chair.

The SECRETARY stated that a letter of apology for unavoidable absence had been received from Mr. Dingwall Fordyce, M.P., who wrote "It would be a great boon to Aberdeenshire if the law of entail were abolished, and if occupiers had the same compensation for disturbance in the occupation of their holdings and the same facilities for purchasing their farms as were given in the Irish Land Bill."

The CHAIRMAN, after introducing Mr. Caird, said—I would remind this meeting that from time to time portions of this subject have come up for consideration in the Chamber, and that certain resolutions have been passed in regard to these; but I expect that the present discussion will be of a more comprehensive and exhaustive character than any we have hitherto had on the subject, and that with the view chiefly of bringing the whole matter to the test of the great public opinion of this country. I trust, however, that it will be gone into in a spirit of freedom and fairness, candidly considering and keeping in view the great interests which are involved on all sides. He commended it to their consideration, believing that it would be so treated.

Mr. McNEEL CAIRD (Stranraer) then rose and said—I have willingly accepted the invitation of this Chamber to introduce for consideration the municipal laws which regulate the relation of landlords and tenant-farmers in Scotland. I do so in a spirit of perfect friendliness to both landlords and tenants, appealing to tenants to state their grievances in temperate language; appealing to landlords to examine them them without prejudice; appealing, finally, to public opinion to hold the balance even between them should they be unable to agree. The first point to which I shall ask attention is that, apart from stipulation, and by mere force and presumption of law, an ordinary farm lease cannot be effectually transferred by the tenant unless he can obtain the landlord's consent. The lease

is the tenant's property—very often, through his skill and expenditure, a very valuable property. I stand here to claim for the tenant one of the essential rights of property—the right to dispose of it. Consider the case of a tenant-farmer who has his means locked up in the land, and whose health or circumstances disable him to remain in the management, though he may have many years of a valuable lease to run. What is the worth of his valuable property then? He cannot sell it—he cannot sublet it. But the rent is growing, the seasons for cropping are running on. He is unable to wait. He can do nothing but cast himself on the mercy of the landlord. He is constrained to renounce the lease, and the landlord enters to his labours with such compensation, if any, as it is of his mere pleasure to give. Is it a righteous law which puts the tenant-farmer into that predicament? Take the case of a child, a few years old succeeding to his father's lease. Fortunate indeed will he be if he has friends possessed of the courage and the ability and will to undertake the grave risk and responsibility of farming for a minor during twelve, fifteen, or eighteen years to come. For if they are not, his rights also must be placed at the landlord's mercy. And then consider what may be the position of the tenant-farmer on his deathbed, with the bulk of his means invested in his farm. The law does not permit him to regulate the succession to his own lease. How is he to secure a home for his widow? His eldest son may be settled abroad, or have no knowledge of farming; he may be a spendthrift or a drundard, but the unfortunate father has by law no power to leave the lease to any other of his children. That is not the case with other property. The full owner of house or land may leave it to anybody he likes. The eldest son there takes only if the owner does not settle the property otherwise. Entails even are not an example of the contrary, for entails are not created by action of the law—each has its foundation in the will and act of the absolute owner. But in the case of the tenant-farmer, the law which

forbids him to transfer the lease has been stretched to exclude him from selecting his heir. Lord President Islay Campbell, when he was outvoted on this question on the bench, indignantly exclaimed "It is not common sense" for the landlord to control the tenant's succession. I may venture to add it is not common justice. But it may be said the landlord may give effect, if he chooses, to the tenant's will cutting out the eldest son. And no doubt he may, for this law is not founded, like some other laws, on any tenderness for the claims of eldest sons. It is a law expressly for the interest of the landlord; which can be pleaded by nobody but the landlord, which is, therefore, not available to the eldest son if the landlord chooses to accept the heir named by the tenant. And here is a climax to the intolerable wrong of this law. It puts both the eldest son and the selected heir at the mercy of the landlord. It practically gives the landlord power to choose between them. He could, if he pleased, play the one brother off against the other, and make any terms he liked. I willingly believe that such an extreme abuse of power would be indignantly reprobated by 999 out of every 1,000 landlords. But the arbitrary power is there. It is the sword hung by a single hair over the head of every tenant-farmer. That hair, to which he has to trust for safety, is the mere will of a fallible, and it may be capricious or offended man; and without suggestion of offence, I venture to say that arbitrary power over other men's rights is a dangerous thing, and can never exist in the established law of any country without leading, from time to time, to grievous wrongs and bitter resentments. On the other hand, it would be unjust that the tenant should have the power by disposing of the lease to escape from his obligations to the landlord. I think it reasonable that in any alteration of the law the original tenant should remain responsible to the landlord along with the tenant to whom he transfers the lease. The legitimate interests of the landlord cannot suffer any real injury by a transaction whose legal basis would be that he should have a new man bound to him along with, and in addition to, his original tenant. It may seem strange that the law should thus prohibit a tenant from transferring his lease, for this prohibition is the offspring of the common law, and the genius of the common law is generally hostile to restraints on the transfer of property. Entails are the work of statute overruling the common law. The truth is, that the courts of law had begun in very early times by settling certain principles which they thought applicable to agricultural tenancies in the state of things which then existed, and when courts of law have established the principles which are to guide them, they go on to carry out these principles as established, without much right to consider their policy, or the changes which time may make on the nature of industries. Lord Kames was a very ingenious lawyer, and directed his attention to the explanation from history of peculiar phases of law. His historical theory of the relation between landlord and tenant will perhaps amuse you, and if accepted may help to explain how the law has come into the present state. He says: "Lands originally were occupied by bondmen, who were the property of the landlord, and consequently were not capable to hold any property of their own; but such persons, who had no interest to be industrious, and who were under no compulsion when not under the eye of their master, were generally lazy, and always careless. This made it eligible to have a free man to manage the farm, who probably at first got some acres set apart to him for his maintenance and wages. But this not being a sufficient spur to industry, it was found a salutary measure to assume this man as a partner by communicating to him a portion of the product in place of wages, by which he came to manage for his own interest as well as that of his master. The next step had still a better effect, entitling the master to a yearly quantity certain, and the surplus to remain with the servant. By this contract the benefit of the servant's industry accreased wholly to himself, and his indolence or ignorance hurt himself alone. One farther step was necessary (and you must remember that this was written in last century) to bring this contract to its due perfection, which is, to give the servant a lease for years, without which he is not secure that his industry will turn to his own profit. By a contract in these terms he acquired the name of tenant, because he was entitled to hold the possession for years certain." It is legally certain that up to the fifteenth century such was the degraded condition of agricultural tenants, described in the statutes of that period

as the "poor people that labours the ground," that they were then liable to have their goods sold for their landlords' debts whether their rent was paid or not, and they were also liable to be turned at once out of their farms by a purchaser of the lands, though their leases were unexpired. Now, in the days when tenants were of anything approaching to that class, it is no great wonder if rules were established by the courts of law which placed their rights on a corresponding footing. And it is one of the conditions of judge-made law that when the courts get into a wrong groove they can hardly get out of it. Questions of policy are for the Legislature; and the time is at hand when the policy and justice of these laws must be reviewed by Parliament. In a country torn with intestine feuds, and when the landlords' retainers were expected to follow him to the field of battle, the risk of introducing an enemy into his band of followers led to restrictions on the transfer of leases which are wholly unsuitable now, and ought to be abolished. There was a case nearly analogous, and Parliament interfered very effectively with regard to it. Feus had the same origin with leases, and had at first much the same character. The feu was just a perpetual lease in which land was given out for a stipulated rent or return. The feuar in all our statutes is termed the tenant, and the feu-duty was in most cases the real rent of the land at the time. One of our best lawyers says, "a tack of long endurance to the tenant and his heirs is simply an heritable right, and to be considered as a feu-right." Now it was a common condition in feu-rights, till near the middle of the last century, that the feu should not be transferred without the superior's consent. This was found to be so impolitic and mischievous that an Act was passed by Parliament abolishing such conditions and making them illegal. But even after that, the courts of law went on to bind more closely on the neck of the tenant-farmer the rules by which (even irrespective of covenant) he was excluded from transferring his lease. I don't think it too much to expect that Parliament shall now do at last for the tenant-farmer what it did more than a hundred years ago for the village feuar. I intend to be very brief in regard to the law of agricultural hypothec, for it has been amply discussed, and has already been condemned by this Chamber. In words which I have used elsewhere, "it keeps the tenant under a perpetual mortgage even before the rent is due. It touches his credit, and hampers him in dealing with his stock and crop, and if misfortune overtakes him it operates most unjustly against his ordinary creditors." I think proprietors are considerably misled by this law. In the long run a proprietor cannot by any means whatever extract from the land more than it is worth. A particular proprietor may get more than his just share now and then, but taking it over a long term of years these things are sure to adjust themselves. If a landlord gets a tenant to promise him too much rent, the retribution will come in a year or two, and he may have to content himself with too little. The man will exhaust the farm and be turned out, the farm will get a bad name in the country, and good tenants will be shy of taking it. And I adopt and endorse the opinion which has been well expressed by my brother: "What we do object to is that the law should give inducements and advantages to landlords to enable them without risk to encourage men of straw to compete for farms, men whom under a different state of the law they would not accept as possible tenants. My only interest now in Scotland (he adds) is as a proprietor. But I feel very strongly that the present arrangement of the law places the tenant at an unfair disadvantage in making his contract, and while its removal would be just to tenants it would not take from the landlords anything they are entitled to, or that on the average in the course of years they could actually realise. For when a man without means gets a farm at a rent which in the end he cannot pay, his failure has a very bad effect on the landlord's interest, and the consequent loss is often far greater than the temporary gain." It is a public and may become a political misfortune, that the fears and prejudices of English landlords should have been invoked in Parliament to obstruct the settlement of a Scottish question upon which the prevalent voice of opinion in Scotland has been pronounced. It is always mischievous—its tendencies and results are the reverse of Conservative—to show to the people that legislation can be controlled by class influences or votes. But it would be all the worse—and I shall be slow to believe it—if any of the landlords of Scotland were systematically to cast themselves on the help of English landlords in the attempt to control or ob-

struct the municipal legislation of Scotland. I now come to the great question of tenants' improvements. When a man's lease is approaching its termination, every ton of purchased manure that he puts into the land is a premium to somebody else to offer a higher rent for his farm. Common prudence compels him to hold his hand, and to take out of the farm as much as he can get on a reduced expenditure, and the productive power of the farm is thus diminished at the end of the lease. This is a source of great national loss. It is hurtful also to the landlord, and hurtful to the incoming tenant, who incurs a heavy expenditure at the beginning of his lease to restore the fertility of the farm. The reduced production by which he suffers, and by which the landlord also suffers through him, commonly continues till he has at least gone over a full course of cropping. Neither is it for the advantage of the outgoing tenant, if he were protected against the loss of his unexhausted manures and tillages. The true interest of all concerned is that he should have a right, by law, to have their value ascertained and allowed to him on his removal. You might then expect that farms in general would be kept in full fertility till the end of the lease, and the whole country would benefit by it. Reflect for a moment on the amount of wealth which is lost to the country through the want of reasonable arrangements on this subject. Have we any means of roughly estimating it? On a seven course farm held on a nineteen years' lease you may reckon that the last five years will be a period of reduced expenditure by the outgoing tenant and of exhaustive cropping. Then the first seven years of the new lease will be a period of liberal expenditure and gradual restoration of productive power. In the next seven years you may expect the farm to be in full fertility; and then begins again the evil cycle of exhaustion. You will have on the individual farm seven years of Egyptianfulness alternating with periods of comparative leanness; but the lean years will be in the proportion of twelve to seven. Where there are no leases and no compensations on removal—judging by the motives by which men are commonly influenced—the leanness will be apt to become chronic, unless in exceptional cases, or where the character of the landlord gives a tenant all the security which he could have from a lease. Then consider that this kind of thing is in constant action all over the country. And when you remember the enormous value of agricultural produce in Great Britain, even as things are, you may form some conception of the untold millions of wealth which might be poured into the coffers of the country through the pockets of farmers, if by wise legislation on the subject, based on the motives by which men are acted on, you could sustain the land in full fertility during the whole nineteen years of a lease, instead of seven out of nineteen. I need hardly suggest that when the value of all that additional produce finds its way into the tenant's pocket, it is according to all experience that no inconsiderable share of it will soon pass into the rent-roll of the landlord. If we could raise the average rate of acreable produce in Great Britain by only one-fourth, which is not an unreasonable expectation, the result in money could probably not be less than forty millions a year. Again, if an enterprising farmer erects farm buildings, or labourers' cottages, or executes drainage or other permanent improvements, the law is prompt to punish him for his rashness. The house is no sooner built—the moment the improvement is executed, the law takes the ownership of it from the man who built it, and transfers it without compensation to the landlord. The high priests of the law pronounce the formula, *indefinitum solo, solo cadit*, and every tenant must bow his head and submit, so potent is this mystic phrase to juggle away the just interest that every man has in the work of his own hands. It contains a dogma of the legal creed which lawyers generally accept with unquestioning reverence. In plain English it just means "What is built on the land belongs to the land." It is an assertion, not a principle or even an argument—an assertion not always supported by fact or reason. We are told in God's law, "The sea is His for He made it," but in man's law the reading is reversed; the house is the landlord's though he did not make it. That is the law of Scotland. Is it reasonable? Is it just? Is the law to cast the balance always and irreversibly against the tenant? Our Yankee brothers have adopted the opposite principle for their unoccupied lands in the West. They call it the homestead law, and it is one main secret of the amazing growth of that great country. Its principle is, "Where a man builds his house and settles, the land shall be his." It is a wise and

noble law for an unappropriated country. So, you see, the rules of law are capable of being adapted, as they ought to be adapted, to the circumstances and wants of society. We of this country had once vast, almost illimitable tracts of unappropriated land in the colonies. And there never was a more gigantic blunder than was committed by our statesmen when they failed to establish a homestead law, available to every subject of the empire, before they abandoned the control of these lands. We have still large tracts of public and in this island—great commons, the birthright and property of the people, which are being encroached on, and frittered away and enclosed year after year by the pressure of neighbouring proprietors. Their extent is immensely greater than is generally known. I would just ask, in a parenthesis, might it not be an appreciable relief to our crowded population, if we had a wise and well-considered homestead law for these immense common lands, giving all reasonable priority to adjoining commons? But, with the exception of these commons, all the land in the island is appropriated, and our circumstances, therefore, require a rule regarding buildings different from the American rule, as well as from that which has hitherto prevailed in this country: I hope to see Parliament establish some such rule as this: What a tenant builds shall be his, and he may take it away unless he is paid for it. That would be just to both landlords and tenants. Our law, in spite of the big words in which it enshrines its theory of property, is so accommodating as to allow half the houses in this good city of Edinburgh to be sliced horizontally across into flats. In the High-street there may be twelve or thirteen flats built in tiers one on the other, each of which may belong to a separate owner, not the owner of the soil. So there can be no inherent difficulty in making the slice a few feet lower down, so that all that is below the surface shall belong to the landlord, and all that is above shall belong to the man who put it there, to be sold (if he be the tenant), when his lease is out, to the landlord, or incoming tenant, or to be taken away if they don't choose to buy it. If such a rule were established, it would lead to the improvements being generally valued over at the end of a lease, for it would not be the landlord's interest to let substantial and suitable buildings be pulled down, and it would be the tenant's interest to make them so. A right to have improvements valued over, when suitable to the holding, is really the practical result, and that I think is the result to which Parliament is likely to come. But there is another way which may contribute to the solution of this question with advantage to everybody. Parliament has for a number of years been in the practice of conferring upon life-tenants, clergymen, trustees, and others having limited or defective rights, the power of effecting permanent improvements upon rentcharge, under the direction of the Enclosure Commissioners. The Commissioners, at a trifling expense, examine into the improvement proposed, its permanency and suitability to the holding, consider the objections of everybody who has an interest, and if satisfied that it is really beneficial for all concerned, sanction and superintend its execution, control the expense, and give a certificate fixing an annual charge for a limited number of years, calculated so as to be equivalent to the cost. Why should not leasehold tenants be authorised to make application for improvements in a similar way? The tenant would meet the annual charge so long as he continued in the farm, the remaining years of the rentcharge would be to him on his outgoing a marketable security equal to his remaining interest in the improvement, the succeeding tenant would pay the annual charge till the term limited by the Commissioners should run out, and then the improvement would pass free to the landlord without his ever having had to put his hand in his pocket, and also with what ought to be, and but for the wrong notions which have been engendered by the present law would really be, a great satisfaction to him—the knowledge that it had become his without injustice to anybody else. It is a striking illustration of the blinding effect of a bad law that a landlord so well spoken of as the Duke of Buccleuch lately went into court to claim, without payment, the wire fences which a tenant had put up. That was too strong a dose even for the legal stomach. I feel convinced, however, that his Grace will be one of the first, when his attention is drawn to it, to consider in a just spirit the claim now made for the tenant. I have no doubt you have read with interest the story of Mr. Scott Russell and the Council of Skilled Workmen, and the

reiled Council of the Lords of Legislation. Some of the schemes which they broached are most commendable in their object, some (like the demand that goods shall be sold by retail at wholesale prices) are perhaps a little after the order of the conjurer who was to get into a quart pot, without reducing his size. But is it not a sad thing that the skilled workmen—the very aristocracy of labour—when promulgating their plans for regenerating society, had not a word or a thought for their humbler brethren, the unskilled labourers of the country? Is there to be nothing done for them? Their domestic accommodation in many parts of the country is simply disgraceful—without the means I will not say of ordinary convenience, but even of common decency. In examining some statistical papers, a few years ago, I came on facts which made a very painful impression on my mind. I have not had any opportunity of lately verifying the notes which I then made, but according to these there were in one county—the wealthy county of Ayr—more than 18,000 families, not fewer probably than 80,000 persons, living in houses of one room; and in all Scotland more than a million of human beings—actually above a third of the whole population—living in houses of that miserable kind. Of these, about 8,000 families, or from 30,000 to 40,000 persons, live in houses of one room without a window, lighted only by the door, or by an opening in the roof or side-wall, serving for both window and chimney. Who will stand up to justify such a state of things as this? Our law of strict entail disables, our law of settlement disinculcates a great many landlords to do much for the labourer's dwelling. And the labourer's employer, the tenant-farmer, his natural ally, who is most deeply interested in his well-being and well-doing, and who would gladly do something to lift him out of his degraded position, is sternly prohibited by law from improving the house accommodation of his people under the pain of having his expenditure confiscated to the landlord. If the people of Scotland were not an enduring and law-abiding people, the empire would have been ringing with the wrongs of that million of silent sufferers. I now pass from these great grievances to others, which, though of less capital importance, are sufficiently galling. The legal warning of forty days to leave a farm is quite inadequate. The exigencies of modern agriculture require a farmer to look a long way ahead. When he manures his green crop, or folds sheep on his turnips, it is in preparation for the grass crop which is to grow, not in that year, nor the next year, but the year after that. He prepares in summer the cattle that are to be fatted in winter. Whenever the corn is off the ground, the tillage for next year's crop should begin. He can hardly get his winter crops in too soon. Yet he may be kept in the most painful uncertainty whether he is to remove or not till he reaches the forty days before Martinmas. The old law was more reasonable. It made a difference between removals in May and removals in November, in the very month of winter. Till 1853 a tenant could not be removed at the winter term without notice forty days before the 15th of May. That gave him six months besides the forty days. But in 1853 there was a bill in Parliament, a technical bill to regulate the business of Sheriff Courts. A clause was slipped into it that there should be no longer a distinction as to removals between one term and another, that forty days before the actual term of removing should be sufficient in all cases. Away went the six months in one blow. I don't suppose there was any conspiracy against tenants, or any design to deprive them of what was a real and substantial security. It was treated as a matter of mere technical uniformity. The policy of it was not discussed. I doubt whether the authors of the bill conceived it to be a question of public policy at all. It was more probably a matter of downright blundering. An earnest protest by one vigilant man in Parliament would have put a stop to it. But it became law, and nine-tenths of the tenant-farmers did not know that the law had been changed upon them. That at least must be reversed. But since it brings under discussion the whole subject of warning to remove, I venture to say that, having regard to the expenditure which a man has now to make on his farm, and the necessity he is under of farming on plans which contemplate the future, no agricultural tenant ought to be removable on less than twelve months' notice at least. What am I to say of that shameful provision of the law which locks the doors of the courts of justice against a tenant when sued to remove from his farm, unless he can establish a defence instantly excluding the action, or find

security to the landlord for what are called "violent profits"? This is an exceptional law directed against tenants alone. I know nothing else in the practice of the law which at all resembles it, unless it be the case of a bankrupt who drags a man into court. It would be had enough if all tenants were treated as bankrupts. But the bankrupt's surety is limited to the expenses of suit; the tenant's surety includes the whole subject-matter of the suit, and a liability for damages and for all consequences at the highest rates. I doubt whether I could count by less than fifties the tenants whom I have myself known to be ejected from their possessions from inability to find security under this law. I don't wish to enlarge on it. I have already taken part in discussing it fully in a different shape. I see no objection, however, to leave in the hands of a judge a discretionary power to order surety if he should see a litigious tenant protracting an untenable defence in order to retain possession. I don't object even to the judge having the power, if he sees fit, to give the landlord possession till the end of the suit, if surety so ordered should not be found; but I protest against the system of turning a man out of court because he has no friends able and willing to back him, and I claim for every tenant the same equal justice in a court of law which is enjoyed by everybody else. I protest also against that unreasonable provision of the law by which a tenant who owes a year's rent may be required to find surety not merely for what he owes, but for five years' rents more in advance, under pain of instant ejection. I further wish you to consider the necessity of some provision in regard to penal rents for variations from prescribed rules of management. I suppose there is scarcely a considerable estate on which it would be possible for the tenants to follow without failure the multifarious rules which are prescribed. And it is common to have conditions that very heavy extra rents shall be paid in case of variation. The courts of law would deal justly by these, for the law says that no man shall inflict punishments or exact penalties beyond what the courts of law consider to be just. But the law is systematically evaded by declarations that such extra rents are to be considered pactional not penal. Landlords in general do not exact these extra rents; but they may be accumulated against a man without his knowledge, and may be presented for hundreds or even thousands of pounds at the end of his lease. When Parliament lays on penalties for offences, it usually provides that they must be claimed within six months, and shall not be recoverable thereafter. That would be a just method of dealing with this matter of penal rents. I have now gone, I hope with reasonable brevity, through the points which I think it right to bring at present under the notice of the Chamber. I have limited my observations to the tenancy laws; but if there be time to-day after we get through these, I will be most happy to take part in any conversation which may arise in regard to the property laws. I am bound in fairness to say that the existing state of the tenancy laws is not justly chargeable against the landlords. Only one, I think, of the laws which I have noticed has been brought in by Parliament where the interest of landlords might have been expected to predominate. Had the principle and policy of these laws been discussed in the Legislature, probably no one could have had the hardihood to propose such a system on the whole, as a just or satisfactory method of regulating transactions between man and man. They are, as I have said, the unhappy growth of principles adopted by courts of law in early times as suitable to a state of society and a system of farming which are long obsolete. But they are the source of recurring and substantial injustice, and I feel assured that if the tenant-farmers will join heart and hand in demanding their removal, their cry shall not be in vain. The hands of Parliament are probably too full to allow of much progress there on this subject in the coming session; but if the tenant-farmers speak out manfully, and resolve to act manfully, these things will take their place among the great questions of the next session. One thing is sure: there is no power in this country which can perpetuate injustice. I don't believe there is any considerable power possessed of the desire to attempt it. The great body of landlords are reasonable men, infinitely better than such a state of law might have expected to make them. If, indeed, the exceptions had not been limited in number—if one-half, nay, perhaps if one-tenth of them had exercised to the full the extreme rights which the law has given them—the agriculture of Scotland could not have been in its present con-

dition, and agrarian feeling might have run as strong in this quiet country as ever it has done in Ireland. The good sense and right feeling of the landlords as a body, and the good sense and patience of the people, have preserved us from that calamity. But no wise statesman will withhold the rectification of bad laws because they have not been worked to extremity nor because their amendment is not demanded with riot or menace.

Mr. A. E. MACKNIGHT (advocate, Edinburgh) said: The subject of the land question and its monopoly in Scotland is one of the most important that can occupy the attention of the public in regard to the vital interests of the country. The transference of political power which has taken place from the privileged classes into the hands of the householders has necessitated great changes, and will necessitate a great many more; but among all the questions for the consideration of the people, there is none more worthy of their careful and deliberate discussion as affecting their social condition than the question of the land tenure and cultivation. And what is our condition in Scotland as to this question? We find the soil of Scotland in a state of complete monopoly, in the hands of a miserable portion of the community. It has been computed that one-fifth part of Scotland is actually, or at least nominally, in possession of about a score families. The number of large estates is enormous compared to the area of the country, some of them consisting of whole parishes. Compared with England or Ireland, this fact is remarkable, because there property is much more equally divided, and the monopoly does not exist to anything like the same extent. Now, the first question presenting itself here is, Was Scotland always in the same condition of land monopoly? The answer is, No. The evil is of comparatively modern date. Up to nearly the period of the Revolution of 1688, land was held generally under estates of from 200 to 300 acres in the lowland and arable parts of the kingdom. In the Highlands and pastoral districts the size was generally larger. During the feudal ages, previous to the Revolution of 1688, although there were cases of large grants from the Crown to favoured individuals of the aristocracy, yet by the general practice of proprietors giving every one of their children landed estates when they were in a position to do so, the large estates were generally sufficiently divided in the course of a few years. To give one remarkable example: The wealthiest and largest proprietor in Scotland was the Earl Marischal, having a rental of £260,000, yet such was the process of division by giving portions to all the members of the family, that when the Earl Marischal of the period went out in the Rebellion of 1715 and was forfeited, the whole remaining property amounted to about £2,000 a-year, which was sold to the York Buildings Company in 1720 for £11,000. But the great cause which has produced so much evil in the shape of the land monopoly is the law of entail passed in 1685. Before this period it was incompetent by law to settle land upon a series of heirs unborn, and to tie it up *ad infinitum*, and the courts of law looked with great jealousy on the Act, which was always strictly interpreted and entails broken whenever they were not strictly accurate. But notwithstanding this fact, the process of extending has gone on to an enormous extent in Scotland. So far back as the middle of the last century the evils of the system were deeply felt. The ablest political philosophers and lawyers have joined in the condemnation of the system—such as Dr. Smith, Lord Stair, and Lord Kames. The organs of such public opinion as existed at the time denounced it—the Convention of Royal Burghs and the Faculty of Advocates. Even then a large proportion of the land was strictly entailed, and in many districts there was hardly an acre which was not under entail. Since that period the evil has gone on increasing, notwithstanding certain remedial Acts which were intended to give relief, but which in their operation have very completely disappointed expectation, and it was not till 1848, when Lord Ruthven passed his Act, that some real relief was given by enabling certain entails to be brought to a close. But the evil still goes on, and half measures will be of no use to rid the country of this evil and monopoly; nothing but a total prohibition of the whole system will be sufficient, and I think nothing less should content the people of Scotland. The evil was far less then than now, when the population has so much increased, and when the question, What shall we do with the surplus population? has become so vital and important. But another subject here presents itself, viz., the great change that

has occurred in the mode of supporting the poor in Scotland. Previous to 1845 the Poor-law was in a great degree practically voluntary, but by the Act of 1845, passed by the Tory Government, this was rendered compulsory, and now the whole landed property of the country is practically confiscated for the support of the idle, the drunken, and the dissolute, as well as those who really are unable to work: and what has been the operation of this law? Why, only an enormous and steadily surging increase in the amount of the rates, an enormous amount of jobbery and extravagance in the parochial boards, in exorbitant salaries to the officials, and in building palaces at an enormous expense, instead of building prisons or boarding the paupers out, which could be done at far less expense. But what has been the operation of this Act in regard to the land question? Why, to make the proprietors of land continue to pull down cottages to drive the people off the estates, in order to drive them into the towns to swell the misery and want of employment which prevails there, and render them permanently a burden on the city proprietors; and the object of all this is to save themselves from the burden of the poor-rates. Now, if these persons thus driven off from the country could maintain themselves and their families if they had a few acres of land and pay rent faithfully, and if they could pay a higher rent for the land than is now paid by the large farmers, then the country is doubly injured by their compulsory removal into the towns to be maintained in idleness on the rates. That these are facts the best scientific agriculturists are compelled now to acknowledge both from scientific researches and practical experience. The Prussian scientific agriculturist, Von Thaer, although at first inclined to think the system of large farms yielded most produce to a country, entirely changed his opinion in consequence of the researches he had made. Those who have had an opportunity of seeing one of our British possessions—the Island of Jersey—will see a country wholly composed of small proprietors, and they will there see the wonders produced by that system—the whole island cultivated like a large garden. The Norman law of equal succession prevails, and David Low says the effect of this law in 900 years has been to put the entire island into small holdings. There is scarcely to be found a property of more than fifty acres, many say from four to fifteen, and most of them are less than fifteen. Is the agriculture there poorer? Certainly not. It is cultivated like a garden. It is farmed at an average of from £4 to £5 an acre, and in the neighbourhood of St. Heliers at from £8 to £12. In spite of these enormous rents, which are actually higher than they appear, as money is more valuable there than here, the farmers live in a state of comfort upon an extent of ground which elsewhere would not suffice to maintain the poorest labourer. I have myself visited Jersey, and can corroborate all that is here said. The gross produce raised per acre is almost incredible. I went over the property of a gentleman who was farming it himself; it consisted of about 25 acres, on which he kept three horses, a number of cows and pigs; from the data furnished to me the gross produce raised by him amounted to the value of £22 per acre over head, equivalent to more than £25 per acre here. The soil is not naturally rich, but is most carefully and plentifully manured, abundance of stock being kept to produce it. The same circumstances take place in the Isle of Man, the agriculture of which, under the system of small properties and small farms, flourishes greatly, also on the Scilly Islands, where the same system prevails with admirable effects, as a competent observer recently communicated to the *English Agricultural Journal*. The experience of Switzerland testifies loudly for this system. There you have minute properties beautifully cultivated, every foot of land turned to account, and the produce enormous compared to the area employed in producing it. The Tyrol and the Palatinate furnish evidence of the same thing; nay, it is found that in those parts of Switzerland and those countries where the estates are the smallest the cultivation and the produce is greater than where the land is held in larger quantities. In France, before the Revolution of 1789, the state of agriculture was most wretched, the tenantry were ground down with the most oppressive feudal exactions, an intolerable game-law, and a miserable and starving peasantry. But after the sale of the larger estates belonging to the Roman Catholic Church and the emigrants, and when the soil of France was divided, there was marked improvement in the cultivation, and an enormous increase in the amount of produce, which has been going on increasing

ever since. In Prussia a great revolution was effected in the land tenure of the country in 1806 by the great statesmen Barons Stein and Hardenberg. The effect of this was to subdivide the large estates and create a numerous body of peasant proprietors. Well, then, what has been the effect of this? Why, to extend and improve cultivation in Prussia, to double the produce, to make it an exporting country, besides feeding all its own inhabitants, and to lay the foundation-stone of that wonderful energy, comfort, and prosperity which has resulted in the realisation of the unity of Germany and the overthrow of her restless enemy, France. Look again to Belgium. What country in Europe has done so much for agriculture under difficulties? She was the earliest to adopt improved courses of husbandry. But this was not effected till the abolition of the large estates, and their purchase in moderate lots, and also being held in moderate-sized and small farms. The remarkable report which was prepared by Mr. Radcliffe after a careful examination of the Belgian husbandry, clearly proves the wonderful effects produced by it; and it further proves, that in the districts in Belgium where the farms were the smallest, the cultivation was better and more productive than where the farms and properties were largest. But let us now come nearer home and revert to the state of Ireland. Since the Revolution of 1688 that country has suffered the evils of enormous estates held by absentee and embarrassed owners, men who could not fulfil the duties of ownership, and who consigned their lands into the hands of middle men who exacted exorbitant rents from the terrified peasantry, and drove them out if they did not pay these rents. Thus it is the land question which has caused those terrible outbreaks which have occurred for more than a hundred years in Ireland. Well, then the Liberal Government passed the Encumbered Estates Act, which has had the most wonderful effect in getting quit of bankrupt proprietors, and dividing the country into moderate-sized properties; and what is a most remarkable fact, these estates have been chiefly bought by Irishmen, and with Irish capital, and the country is being gradually filled with a resident and responsible proprietary. Now, we want the same thing in Scotland—we want an Act for the sale of Encumbered Estates in Scotland, so as to facilitate the transfer of the land into responsible hands. What is the deplorable position of the landed property in Scotland in regard to debt? Why, it has been computed that nearly two-thirds of the land rental of Scotland is in the hands of creditors, the owners having practically no control over it. The creditors, provided they get the interest of their bonds, care nothing for doing anything on the estate, and the owner can do nothing, as he does not receive the rents. At present three of the largest estates in Scotland are under trust, the owners having no power to do anything in regard to them. Can anything be more of a wretched deadlock than this? Is it not notorious that in regard to entailed estates you can tell them by the wretched and miserable cultivation which they receive? If you create a series of life-rents it is the object of the life-renter to squeeze as much out of the estate during his life as he can, and to rob it of all that it should receive. In regard to the tenantry, the question is What rent will you give? and if the reply be What will you (the landlord) spend on improvements? the answer is, *Nothing*; and the effect is that if the tenant invests his capital in the land, and if he falls into difficulties, and cannot pay the rent during the lease, he is turned out and robbed of the whole sum he has spent on improvements, and the land let to some one else at an advance of rent produced by his money. This state of the law is disgraceful, and I only wonder at the apathy and forbearance of the tenantry in bearing it so long. We must demand an Act for compensation for unexhausted improvements; and I hope the Chamber of Agriculture will be unanimous in this after the full explanations given by Mr. Caird in regard to it. It would effect great good, and we must have such a bill as was brought in by the Lord Advocate last year to abolish Scotch entails, but amended so as to prevent the English system of entails from being introduced, which was to a certain extent admitted by that bill. The Chamber has already petitioned for that bill as amended, and although the agricultural mind is proverbially slow, the land monopoly is at the root of all the evils from which the tenantry suffer. But further, the people of Scotland must demand an alteration in the law of succession, as the present law causes such terrible injustice. If a man dies after having invested his means in

land and leaves several children, and not having made a will, the whole would go to his eldest son, leaving almost nothing to the rest; therefore the law should be altered; and if a man dies without a will, his property, heritable and moveable, should be equally divided among all his children, sons and daughters alike. But I go further than this; I think that no one should have the power of disinheriting any of his children, and the law of succession should be made equal and compulsory. This law has been productive of enormous benefit in France, in Prussia, and America. It gives satisfaction to the great body of the people, and no government in these countries, however anxious, could attempt to repeal it. It is certain, I think, that it will be carried sooner or later in this country when our public opinion is ripe for it, and considering the rapid advance we have made recently in political questions, no one can say how soon that may be. And lastly, we want a measure for Scotland similar to the Irish Land Act, to facilitate the acquisition of small properties by the people, and to compensate unexhausted improvements of the tenantry. The expense of preparing titles to land should be diminished, the stamp-duty should be remedied so as to encourage the purchase of small properties. It is very provoking that Ireland should receive so much more attention from Parliament than Scotland; one reason seems to be that we have got too quiet and not sufficiently clamorous. Let us cast off this sloth, and by means such as this Chamber presents, publicly, loudly, and persistently demand those reforms from the want of which we have suffered so much. The land question is the real battle to be fought. I wish my voice could be heard all over the country, urging that the people should never rest satisfied till it is settled in a satisfactory manner and according to the principles of justice. Then we shall have Scotland for the Scotch; bold and stalwart yeomen will again be restored to the "land o' cakes and brither Scots," and a happy and contented peasantry, not dependent entirely on the precarious wages of labour, will cultivate with energy and pleasure their fields, and prove the truth of the inspired proverb that there is much food in the tillage of the poor.

Mr. RIDDELL (Hundalee) said the paper read by Mr. Caird has exhausted almost every idea I have on the subject, but I wish to make a few remarks regarding it, and as these remarks come from a tenant-farmer, if they have the slightest effect in giving tone to the able speech of Mr. Caird, I shall feel amply rewarded. I shall endeavour to show that the general practice of the laws referred to by Mr. Caird might be a very great inconvenience and discomfort as well as loss to the tenant-farmers. In regard to the reference to the law of entail, I will pass that over at this time as being a matter not so much before us as the other parts of the subject. It has occurred to me that it will be necessary to assume certain cases in order to bring out the difficulty and the discomfort that arise out of our present Land-laws and their provisions affecting the occupation of property. The effect of this particular part of the Land-laws has been strongly brought out by Mr. Caird, and any practical farmer knows the result of it. But, passing from this knotty point to one that perhaps more immediately concerns us at the present moment, I would refer to some cases to show that the occupation of land in this country is far from being in a state suited to the requirements of the present age. For example, a farmer may become unable to carry on his farm, executes a trust-deed, the trustees find it necessary to vacate the lease, and wind up the business. The tenant may have laid out a considerable sum of money in improvements, such as building, draining, &c., and notwithstanding all this, neither he nor his creditors are entitled by law to any part of the rise of rent which in such circumstances usually occurs, or recompense for unexhausted improvements. A worse case than the one just referred to might easily occur. A landlord may let his farm to a man who is almost penniless; the latter may borrow money from all and sundry to start his farm, buying lime, tiles, manures; in fact, sets his farm agoing on money got from the public, which money all goes to improve the land. Well, what may happen? The farmer comes very soon to anchor, leaving not a farthing behind to pay his creditors; the landlord sweeps the table, legally pays himself, and besides re-lets his farm, maybe at hundreds a-year more, all legally of course, but not the less a hardship and an injustice to his creditors. Our Land-laws may frequently be a great inconvenience and loss to families where the father is removed by death, leaving a widow and family, where the comfort, con-

venience, or the necessities of that family require the lease to be given up, although the remaining years of it may be worth a considerable sum; legally all must be left to the landlord. The law as it stands operates much against the keeping up the continuous fertility of the land, the tenant not having the right to payment of unexhausted manures, &c., at the termination of the lease. The landlord is not bound to give it, and the tenant must either suffer loss from the want of such accommodation, or lay out the money himself on these improvements, which will go into the pockets of the landlord at the termination of the lease—this is in a case where the landlord is either unwilling or unable to advance the money necessary for the carrying out of such improvements. It is frequently said, and apparently believed by not a few, that tenants are quite safe in the hands of landlords, for undoubtedly they would in that case be dealt with in a most liberal manner in all such cases as those referred to. But seeing that the question is not one between landlords and tenants, but has reference to the law of the land, perhaps blinding landlords to the hardships and even injustice that many a time occur, the question may with great propriety be asked, Were the present Land-laws necessary and somewhat just at the time when they were enacted? Assuming that they were, and the circumstances of the country—of landlords and of farmers—were unaltered, the Land-laws would still be necessary and equally just, and ought to remain un repealed or unaltered. But I venture humbly to say that the circumstances of the country are not only quite changed, but the relations between landlords and tenants are also changed. When these laws were made, very little, if any, capital of a permanent nature was invested in the soil by the tenant. Now, however, it is no uncommon thing for tenants to invest large sums of money, which, to all intents and purposes, some may say, are as permanent as the soil itself. In not a few instances tenant-farmers expend nearly as much on poor land per acre as the same land would sell for if brought into the market. In these circumstances I do not hesitate to say that this Chamber should use every legitimate means for getting repealed or altered all laws relating to land not in keeping with the altered circumstances of the country, and at variance with the best interests of the community. If not altered or repealed, the continuance of these laws is calculated to cause a great amount of irritation and mischief between parties whose interests are, or at all events ought to be, identical. The connection between landlord and tenant is of too close and important a nature to be so lightly broken. The paramount interest of society is to have the soil properly cultivated. Who, I ask, can stand up and advocate the continuance of the laws relating to tenant-occupancy of land, of hypothee, and game in all their integrity? We sometimes here of compromises, of taking this or that as an instalment. I believe that nothing short of repeal of some of these laws and the alterations of others will have the effect of permanently increasing the fertility of the soil. Adam Smith truly says: "Whatever increases the fertility of land in producing food, increases not only the value of the land upon which the improvement is bestowed, but contributes likewise to increase that of many other lands by creating a new demand for this produce. That abundance of food, of which, in consequence of the improvement of land, many people have the disposal beyond what they themselves can consume, is the great cause for the demand, both for the precious metals and precious stones, as well as for every other conveniency, and ornaments of dress, lodging, household furniture, and equipage. Food not only constitutes the greater part of the riches of the world, but it is the abundance of food which gives the principal part of their value to many other sorts of riches." And I may add, it is a well-known fact that abundance of food in the land makes a loyal, happy, and a peaceful people.

Mr. SCOT SKIRVING said Mr. Caird had said nothing to which they would not all agree, and which, if pressed, had a fair chance of being soon made law in the way he pointed out. Some of these laws were so bad that he was really ashamed to say that he had never heard of their existence, and Mr. Caird had pointed out that the reason was the good sense of the landlords had made them dead letters; but they were still repeated in the leases and covenants. He wished to ask Mr. Caird if he included in "commons lands" the crown lands.

Mr. CAIRD replied in the negative. The crown lands were private property—the property of the nation in a different sense. What he had been speaking of was the commons lands, waste to a large extent, on which great numbers of people in the neighbourhood had a right of common, and turned out cattle on them.

Mr. SCOT SKIRVING said there was one of these in the county where he resided, and instead of being waste it was used by too many beasts.

Mr. CAIRD: And the consequence is that there is not enough for any of them.

Mr. SCOT SKIRVING said it would be worse to let squatters put up huts upon it. He had to move—"That the Chamber tender thanks to Mr. Caird for his address on the land tenancy laws, and remit to the directors as a committee, with power to add to their number, to have the paper printed and circulated, and also to appoint a day for the further discussion of the subject."

Mr. GOODLET (Bolshan) seconded he motion. The paper was a most admirable one, and was calculated to do a great deal of good if widely circulated over the country and read by our legislators. He suggested that the committee should be also empowered to gather facts bearing upon the subject. These would make any representation to the Lord Advocate or Parliament far more effective. His object in proposing this was not to bring up invidious cases against individuals, but to obtain well authenticated facts to show the working of these laws and the necessity of reforming them, not only in the interests of the tenant-occupiers, but also in that of the landlords themselves and of the country generally.

Mr. WALTER WILSON (Hawick) did not think it would serve any good purpose to inquire into the practice of the laws. The laws were there, and it would be better to argue against them from their obvious tendency. He thought they should endeavour to discover the Lord Advocate's views on the subject of leases and improvements made by tenants.

The motion was ultimately passed in the following form: "That this meeting return thanks to Mr. Caird for his address upon the land tenancy laws, and remit to the directors as a committee, with a power to add to their number, order the same to be printed and circulated, and that facts and information bearing on the question raised should be collected by the committee."

The motion was carried, and Mr. CAIRD, in reply, remarked that it did not seem to him right in his paper to complicate the discussion of the question of the land tenancy laws with the totally distinct question of the entail laws. He thought also that it was better to try and show what were the inevitable results of the tenancy laws than to attack particular individuals. He thought it would be a grievous mistake for them to enter upon the line of attacking anybody. The laws were bad—so bad, indeed, that it was humanly impossible that they could work well. If they took that ground in their argument, they were bound to succeed. They would only provoke opposition, that might otherwise not be roused, by taking the argument of individual hardship.

The Chamber then adjourned.

IN - A N D - I N B R E E D I N G .

At the last meeting of the Farmers' Club, Mr. Thomas Congreve "was sorry to say that year by year it became more and more difficult to buy a lot of good beasts to graze. Whether he desired to get Shorthorns, Here-

fords, Welsh runts, or any other kind of stock, he felt the difficulty to be increasing every year, and that certainly seemed extraordinary, considering the immense amount that was spent in prizes, and the vast amount of discus-

sion that had taken place. Looking back to thirty years ago, he believed that graziers were now in a worse position in that respect than they were at that period. Mr. Smythies, who was a Herefordshire man, would bear with him for saying that the Herefords were getting lighter, more gaudy, less deep in the thigh, less fleshy than they used to be. What graziers wanted was an animal that would carry some butcher's meat about it." Earlier in the season Mr. Sanday said at Newark that "Shorthorns were inferior both in size and quality to those bred twenty or thirty years ago." At the same meeting Mr. Colton, another acknowledged judge, said, "the Shorthorns now bred had nothing like the flesh they had twenty ago;" and at the Farmers' Club discussion, Mr. Thornton, the auctioneer, and for some time assistant editor of the *Shorthorn Herd Book*, said, "there were at the present time four fashionable tribes of cattle which commanded the highest prices, and these tribes, especially the two most in demand, Bates and Booth, were singularly closely bred. The most successful lines were those in which one animal was the sire of the sire and of the dam also; that is to say, half brother and sister by the same sire out of different dams. This system of breeding had produced some of the finest cattle in the country, and he believed had also been successfully tried in some cases with race horses. Where cattle were closely in-bred and preserved their constitutions, they had a tendency to lose colour, save perhaps in the ears, and to become white. The wild cattle of Chillingham were white." And further on, "Commander-in-Chief, a comparatively light roan bull, has begotten several white calves. In seeking pedigree bulls, quality was too often overlooked, and it was owing to that cause and the insufficient number of animals bred in the country, that it was so difficult to find good graziers." Here, while admitting the decline of good graziers, the remedy suggested is *quality*; while at Newark the cause of this decline was mainly attributed to "the principle on which most herds are raised, viz., the fashion, or rather infatuation, of collecting from certain families without any regard to the qualifications necessary for producing and perpetuating good animals. To follow out this plan in-breeding must to a very great extent be resorted to." So says Mr. Sanday, as Mr. Colton, again, declares that "the deterioration of Shorthorns must be owing to breeding in-and-in too much."

Thus, it will be observed, we have these several speakers at direct issue. Equally willing to allow the full force of Mr. Congreve's complaint, Messrs. Sanday and Colton maintain that the cause is in-and-in breeding; as, on the other hand, Mr. Thornton tells us that the corrective will be found in the use of pedigree bulls of more quality—a phrase, which being interpreted by the context, goes to say that the best quality bulls are those which are "closely in-bred." He further assures us that "this system has produced some of the finest cattle in the country;" whereas, Mr. Sanday says, "some thirty years ago he saw some Shorthorns at Mr. Booth's, and he was quite convinced there were no such cows like them now." Mr. Thornton, however, cites some of the modern stars, the latest of his appearances being Commander-in-Chief, "a comparatively light roan bull," with a poor weak steer's head; as if this be cited as an example of any in-and-in breeding it is not a very happy one, for the animal fails just where one might expect him to—that is, in masculine character. Or, take another famous tribe quoted by Mr. Thornton, and perhaps the most carefully in-and-in-bred family on record, the Duchesses, and what became of those which at least at that time "commanded the highest

prices?" They were simply the greatest of failures. The luckless Betts-Bates Duchesses, if not utterly barren lacked the power to carry their calves. If, says Mr. Thornton these in-and-in-bred animals "preserve their constitutions, they have a tendency to lose their colour," and their flesh, and their procreative powers. It is well known in the human race that the continual intermarriage even, so far as sanctioned by the law, tends to every kind of weakness both of mind and body, until Nature interferes and indignantly blots out these imbeciles from the face of the earth. Mr. Valentine Barford bred his Leicesters so closely at home that at last there was little left but their fleeces and pedigrees; and with stock where do we find the thin papery touch and the weak feminine head most prevalent but in those animals which have been so jealously bred in-and-in? Again, how is it that the once-famous Hereford steers are growing "lighter, more gaudy, less deep in the thigh and less fleshy than they used to be?" mainly, as we take it, because there is now but one kind or variety in fashion instead of three or four. In other words, there is less opportunity for commanding a good cross. Nothing now will go down but a white face, and yet one of the best Hereford oxen we ever saw was a cross of a white and mottle.

Some ten or twelve years since the late Mr. Dixon, who was busy just then over his HERDS, said in print: "We should uncommonly like to see how Pocahontas would hit to Stockwell or Rataplan (her own sons); and there can be no reason, when the plan is tried so successfully among Shorthorns, why racing men should quite shrink from it." Barring men were so outraged by the very idea, that the writer shrank from his own proposition; stating in explanation that "as for advocating such a plan he never dreamt of it." Sixty years since an experienced breeder of race-horses wrote how "the necessity of crossing to prevent *degeneration* is an important study in every species;" and the maxim is as good now as when it was first penned. Of course there are cases of in-and-in breeding for the turf which have proved successful, but these are very exceptional, and very different from the plan of getting back to the same strain of blood after a separation of some generations. Whereas, by "Belvidere dam by Belvidere," or a pedigree depending on a heifer being served by her own sire, excites no feeling of revulsion amongst the Shorthorn fancy, but is the rather prized as the proper thing and the attainment of all excellence. Hence it happens that we hear of animals which have neither size, symmetry, nor flesh, being sold for thousands on the strength of pedigrees which are in principle radically wrong and unwholesome.

There can be no getting away from facts; our butcher's beasts are gradually deteriorating, while some go further, like Mr. Sanday, and maintain that our breeding animals, even of the highest caste, are by no means so good as they were. And why so? The old ethic was that nothing tells better than a good cross of the same breed, as that periodically you must go in search of this. Whereas the fashion now-a-days is to keep to your own strains and families, and buy and sell without caring to look at them as they did the luckless Duchesses in Willis' Rooms.

THE YORKSHIRE AGRICULTURAL SOCIETY.—The Earl of Feversham has been elected president of the Yorkshire Agricultural Society for the ensuing year.

THE PRODUCE OF THE SEA-SHORE.

BY CUTHBERT W. JOHNSON, F.R.S.

When inquiring, during the last two months, into the habits of the salmon, at the mouth of some of the Cornish rivers, I could not avoid noticing other important contributions derived from the sea. Wherever the tourist visits these grand iron-bound coasts, he finds the Cornish farmers employed in carting away from the shore either the sand or the seaweeds which are found there in such great abundance. Thus, on the beach at East Looe, on an extent of about two hundred yards in length, on one night in September there must have been at least one hundred two-horse cart-loads of seaweed left by the tide, after an on-shore gale. These weeds were of different kinds, the greater portion being of a large variety, green and juicy, the leaves being three to five feet in length and three or four inches broad.

The farmers' carts come for these when the tide has receded, and cart them as far as even three or four miles from the shore. Other landholders carry these weeds in barges up the estuaries, and, as is the case at East Looe, in such vessels as are able to enter a canal, so that these weeds are used as far as five or six miles from the sea. Then again they are carried on to the fields in large wooden panniers by donkeys—especially on those portions of the coast of Cornwall and Devon where the cliffs are so elevated that it is only by zig-zag paths that even donkeys or ponies are able to carry their loads.

It was on the 27th of this last September that a strong south-westerly gale, at the height of a spring tide, drove an enormous quantity of seaweed on to the beach at Penzance. The shores of Mounts Bay, from Mousehole to Cudon Point, were in fact lined with these weeds, some of which are very beautiful, and appear as if full of a gummy juice. On the following morning, at low water, there were many carts employed in carrying the weeds on to the shore, and piling them in great heaps just above high water mark; but these heaps were all removed during the same afternoon. The farmers around Penzance use them very largely for their celebrated potato and cauliflower fields, from which the metropolitan market is so extensively supplied. From an early hour in the morning many labourers were employed, on the shores of Mounts Bay, with rakes having peculiar long iron-teeth, in collecting together these weeds, for which they are paid by the farmers from 1s. per cart-load when the weeds are plentiful, to 1s. 3d., or 1s. 6d. per load when they are obtained only in such limited quantities as to require them to be even cut from off the rocks.

These weeds are best applied to the land in their freshest state. It is true that they are largely used after being mixed with farm-yard manure or sea-sand; but all the Cornish farmers with whom I conversed concurred in opinion that they should be ploughed into the ground in their greenest state, and that they employed at least thirty loads of these per acre, and that if the weeds were readily accessible they would dress the land with double or treble that quantity. It is only in modern times that seaweeds have attracted the attention of the botanist. The Rev. D. Lunsborough in his very excellent "History of British Seaweeds" has thus described the extent to which they were formerly neglected. He observes: "About fifty years ago, in some academic chairs, they were treated with disdain. We have heard of a student who about that period having collected some

beautiful *Algæ* on the sea shore, showed the contents of his vasculum to the professor of botany whose lectures he attended, in order to get some information respecting them. The Professor, after looking at them, pushed them from him, and exclaimed, 'Pooh! a parcel of seaweed, sir, a parcel of seaweed!' The Newhaven fishermen seem to have caught the spirit of this learned Professor, for to this day they denominate all the finer seaweeds *chaff*. They are weeds, and what are weeds? Dr. Johnson tells us that they are plants that are *noxious* and *useless*. But they are *seaweeds*, we say, in mitigation. And does that mend the matter? Horace spoke of them as '*Intillis algæ*'—useless seaweeds. And Virgil goes even beyond his friend Horace, for when speaking of something which he regards as worthless and filthy, he says it is '*Alga projecta vilior*'—viler than the seaweed cast out upon the shore. Its very calamities are turned against it. '*Refunditar algæ*,' says another poet—the sea loathes it and casts it out. In Scotland, seaweeds go very generally under the name of *wrack*, or in the south and west of Scotland *wrecks*, and in this we have one of the many instances of the effect which the great intercourse in ancient times between France and Scotland had on our Scottish language, for what is *wrack*, or *wreck*, or *wreck*, but the French word *varcech*, which signifies seaweed? In the Channel Islands *vraic* is the word employed."

It is interesting to follow these seaweeds into their widely-dispersed localities. This has been done by Dr. F. Meyer in his "Geography of Plants," in language which it is needless to vary. He observes in his work, translated by Miss Johnston, and published by the Ray Society: "The *Fuci* solely belong to sea-water; there are true *Fuci* found in the Caspian Sea, though at the present day it is unconnected with the ocean. Almost all the marine plants are rooted at the bottom of the sea, chiefly on rocks, and near the shore, where the water is shallow; nor do the *Fuci* seem to go to a very great depth, though certainly as deep as a few hundred feet. It is true that some have been measured, and have been found to be more than 300 feet in length, such as the *Fucus pyrifrus*, at Cape Horn, the leaves of which are seven or eight feet long; but these, as I have observed of other plants on the West Coasts of South America, do not grow in a straight direction from the bottom to the surface of the sea, but lie rather horizontally, and therefore, though of so extraordinary a length, can grow in water of much less depth. The Straits of Magellan and La Maire are full of this gigantic *Fucus*, and there, in the cold water, where it grows to an extraordinary size, seems to be its true zone. This *Fucus* is found in the New World, through all the zones from the extreme north to the extreme southern point. The same plant also appears at the Cape of Good Hope, and Baron Humboldt brought it from the tropical seas, but in neither place does it grow so large as around Cape Horn.

On the coasts of the ocean where the great *Fuci* grow, they cover the bottom of the sea with an impenetrable vegetation, which serves to support millions of animals. When sailing over such regions in a calm sea, we enjoy the splendid sight which these submarine meadows and forests present to the eye, the variety and splendour of which is increased by tall corallines, Madrepores, scarlet sea anemones, and corals of various colours. At ebb-tide

the *Fuci* in general are close to the surface, they are often left quite uncovered, and begin to dry until the returning tide again refreshes the flagging plants. But when the sea is agitated by storms, when the waves dash with violence against the rocks, those marine plants are torn up, and float on the surface of the water, until they are thrown on the shore. But the torn-up *Fuci* are seldom carried far from the coast; and, therefore, in earlier times their appearance was the surest indication to the mariner of his approach to land. Yet Columbus was much deceived by them in his first voyage of discovery, when he reached that part of the Atlantic, now known as the Sargasso Sea. In the Atlantic, just within the great equatorial current, is a space of at least 40,000 square miles, in which is always floating on the surface a great mass of seaweed, all of one variety, called *Sargassum vulgare*. Many explanations were given of the origin of this *Fucus*, but it is now ascertained that this is one of the few plants which grow floating freely in the water.

We find then that these weeds are produced in various marine sites—on rocks, at the bottom of the sea, and, as in the case of one weed, on the surface of the sea only; for, like our pond or duckweed, the weed *Sargassum baciferum* has not been found attached, but always floating on the surface of the sea. Seaweeds of different kinds are used as food—of such is the seaweed (*Porphyra ulva*) from which our condiment laver is made. The edible nests made by the Chinese swallows is supposed to be formed out of some gelatinous seaweeds. Other seaweeds are known to us, as carageen, or Irish moss. The fronds of these are composed to a very considerable extent of a substance somewhat like starch, which, when boiled in water, is extracted, and forms a jelly on cooling.

Although seaweeds commonly grow attached to the hardest rocks at different depths of water, their growth is rapid. That of some of the larger seaweeds is recorded by Dr. P. Neil, who reports the facts observed in the course of the erection of a beacon on the Carr Rock, in the Frith of Forth (D. Lamsborough, "British Seaweeds," p. 20). This rock is about 60 feet long by 20 broad, and it is uncovered only at the lowest ebb of spring tides. When the operations were begun, it was clothed with large seaweeds, especially with the great Tangle and the Badderlocks. In the course of 1813 the workmen succeeded in clearing and levelling a considerable portion of the foundation of the intended building; but in November the operations were necessarily abandoned for the winter. At this time the rocks by pick and axe had been made quite bare, the seaweeds had been cut away, roots trampled, and much of the rocks had been chiselled, so that the very stumps had been cleared away. On returning to the rock in 1814, to resume operations, it was a matter of no small surprise to find the rock as completely covered with large seaweeds as when they first landed upon it, though little more than six months had elapsed since they left it quite bare.

Then as to the chemical composition of these plants, seaweed called Tangle was analysed by Hodges. He found, after it had been dried in a temperature of 212 degrees, that it contained

Organic matter.....	66 per cent.
Ash	34 "

The inorganic matter or ash was composed of

Silica	2.7 per cent.
Potash	8.2 "
Soda	23.8 "
Lime	5.2 "
Magnesia	8.5 "
Chlorine.....	11.7 "
Phosphoric acid.....	5.4 "
Sulphuric acid	20.2 "
Carbolic acid.....	12.3 "

Some of the *Fuci* also contain a saccharine substance, which Vanquelin long since showed to possess the characters of mauna.

Another fertiliser, sea-shore sand, is employed in enormous quantities by the farmers of Cornwall and Devon, and this chiefly for the large proportion of finely broken marine shells of which it is composed. The late Professor J. F. Johnston dwelt at considerable length on these fertilising marine sands. He stated, on the authority of "De la Beche's Geological Report of Cornwall," that it has been estimated that seven millions of cubic feet of this calcareous sea-sand are annually employed by the Cornish farmers. He adds (*Quar. Journ. Agri.*, 1843, p. 244): "On the western coast of Scotland, also, and on the shores of the Island of Arran and of the Western Islands, this shell-sand abounds, and is applied extensively, and with remarkable beneficial effects, both to the pasture lands and to the peaty soils that cover so large an area in this remote part of Scotland. It is chiefly along the coasts that it has hitherto been extensively employed, and it is transported by sea to a distance of eighty or one hundred miles. Of the origin of the use as a fertiliser of the calcareous sand of Cornwall we have no account. It seems to have been employed by the Cornish farmers from a very distant period. They were empowered by a grant so long since as the time of Richard, Duke of Cornwall, to carry away this sand free from the payment of any toll to the proprietors of the seashore. This grant was confirmed in the year 1261 by another grant from Henry III., and by the statute of the 7th of James II., c. 18, whose preamble declares this sand 'to be very profitable for the bettering of land, and especially for the increase of corn and tillage within the counties of Cornwall and Devon.' This sand is described by Sir T. D. Lauder (*Trans. High. Soc.*, vol. viii., page 763). He says: 'On examining the sand with a sufficient magnifying power, I found it, as I had anticipated, to be composed of comminuted marine shells, I think I may say, almost devoid of any siliceous mixture. I was a good deal surprised,' he adds, 'to learn that the railway which runs into the heart of the county of Cornwall, branching off in two different directions from Wadebridge, had been entirely conceived, planned, and executed for the inland transportation of this sand for agricultural purposes, and that by means of the railway waggons, and afterwards by that of carts, it was rapidly finding its way over a great part of the county, and producing the most extraordinary effects on the fertility of the surface.' On the coast of France, and especially in Brittany—on the South side of the English Channel opposite to Cornwall—it is obtained in large quantity and is in great demand. It is applied to the clay soils, and to marshy grass-lands with much advantage, and is carried far inland for this purpose. It is there called 'trez,' and is laid on the land at the rate of 10 or 15 tons per acre. On the southern coasts of France it is known by the name of 'tanque' or 'taugne.' The shell-sand of Cornwall," continues Professor Johnston, "contains from 40 to 70 per cent. of carbonate of lime, with an equally variable small admixture of animal matter and of sea-salt. The rest is chiefly siliceous sand." He then gives the analysis of some tanque from the south of France, and of some shell-sand from the Isle of Isla. They were found to contain, per cent.:

	Taugne.	Isla shell-sand.
Sand, chiefly siliceous ...	20.3	—
Alumina—oxide of iron ...	4.6	71.7
Carbonate of lime ...	66.0	28.0
Phosphate of lime ...	—	0.3
Water and loss... ..	9.1	—

There is another fine sand extensively employed by the French farmers—the infusorial sand, which is thus noticed

by the Professor. It is a kind of fine mealy-looking sea-sand, used extensively in Normandy upon the light sandy soils, and which is often carted many miles inland. Mr. Lorimer, of Aberdalgie, in a late excursion along the coast of Normandy, was struck by the preference which was given by the local farmers to this fine meal over the banks of shell-sand which abound also on the coast. He forwarded a specimen to Professor Johnston for examination. It was found to contain :

	Per cent.
Organic matter	5.06
Common salt	1.01
Gypsum	0.32
Chloride of calcium	0.73
Magnesia	a trace
Carbonate of lime... ..	43.50
Alumina... ..	0.17
Oxide of iron	1.20
Oxide of manganese	a trace
Insoluble siliceous matter	47.69

When examined under the microscope, this sand is seen to consist of minute crystals of carbonate of lime, of broken limbs and claws of small crustaceous animals, and of the shells or sheaths of numberless infusoria.

In Normandy it is generally employed in the form of compost, and is extensively mixed with the farmyard manure, which it is said greatly to improve. The practice of the Norman farmers thus referred to we have long seen successfully adopted by the farmers of Suffolk, with the crag of the eastern portion of that county. It is there very commonly used to form the bottoms and the coverings of their dung-heaps, although it does not at first sight appear to be remarkably well adapted for the

purpose. We have remarked the calcareous sea-sand of the north of Devon, employed for a similar purpose, even in localities such as those around Bideford Bay, where, from the steepness of the shore, and other causes, it is usual for the small farmers to bring the sand from the shore in sacks on horses' backs. There is also a peculiar sand collected into barges by dredging scoops near Erith, from the bed of the river Thames, that I have noted to possess peculiar fertilising powers. It is there constantly collected by the crews of a little fleet of vessels, for the use of the builders of the metropolis, and is the siliceous and other sand washed down by the water of the Thames. It possesses a peculiar nauseous putrescent smell, which is probably attributable to the presence of a considerable portion of the mass of organic matters which are poured into the bed of the river from the sewers of the metropolitan districts. The expense of this sand I should think not so great as to preclude its employment on localities convenient for water carriage.

In thus glancing at the seaweeds and sand which the farmers of our western counties employ to such an enormous extent, for what they call "fattening" their land, the suggestion naturally occurs, whether we may not extend their employment to other portions of our island,—whether there are not other masses of shells, deposited in inland districts, like the crag-sand of Suffolk, and the fossil shell-sands of one or two of our midland counties, that might be rendered available, as *permanent* improvers, of certain soils. The employment even of seaweed, although commonly limited to a certain distance from the sea, there is reason to believe might be much farther extended than at the present time,

THE VALUES OF STOCK AND CROP.

The value of our agricultural produce and live stock is necessarily a subject of considerable interest, not only to those more especially identified with this industry, but also to statist and social investigators; and it is too much the custom to depreciate the agricultural interest, because Commerce has become king, and manufactures, in consequence of the cheapness and abundance of the raw material contributed from all parts of the world, are making giant strides. While we are ready to admit the nation's obligations to commerce and manufactures, we still desire to see justice done to agriculture. The area of our insular kingdom it must be remembered is limited, and while the population is increasing at the rate of nearly 1,200 a day, but one-third of this number emigrates. Although the nation has strengthened itself by about four millions in the last twenty years, yet we have at the same time sent out almost as many more millions to our colonies and the United States, where they are multiplying as rapidly as they did at home, and with wider scope for their energies. Man, it has been well observed, creates the materials of his life; and the millions of acres of fertile land in the New World call for hands to gather the varied harvests they yield to modern industry. Grain is brought to our shores and sold at a profit, from countries so remote as California and Australia, by the skill and enterprise of commerce. But it is satisfactory to find that while the value of the merchandise imported in the last ten years has increased 61 per cent, the value of our produce and manufactures exported, has also increased nearly 50 per cent.

Although it cannot be denied that there has been a large increase in our foreign food supplies, this may be

attributed to the improved condition of all classes, the more general distribution of wealth, and the extended competition in shipping, which necessitates their obtaining freights.

QUANTITIES OF THE UNDERMENTIONED ARTICLES OF FOOD IMPORTED INTO THE UNITED KINGDOM.

ARTICLES.	Average of 3 yrs. 1858—60.	Average of 3 yrs. 1863—70.	Increase pr. C.
Cattle.....Head.	344,843	759,984	120
Meat:—Beef.....Cwts.	216,790	230,030	6
Bacon....."	210,014	648,495	208
Pork....."	142,140	199,750	41
Fish....."	300,814	625,159	107
Corn:—Wheat..."	20,400,754	33,745,608	65
Wheat Flour..."	4,090,224	4,432,829	8
Other kinds..."	18,913,672	31,833,465	68
Rice.....Cwts.	2,238,028	4,782,320	113
Potatoes.....Cwts.	957,208	1,491,189	56
Butter....."	551,114	1,171,946	113
Lard....."	137,665	236,973	72
Cheese....."	451,306	964,616	113
Eggs.....No.	150,337,133	418,994,640	178

We published during last year some statistical facts and estimates, calculated to show the aggregate value of agricultural industry, and are induced to return to the subject, in consequence of our figures having been taken up at the late Social Science Congress at Leeds, and it having since been stated that our calculations were excessive, as compared with the data of Mr. Caird, given in the Statistical Society's Journal for June, 1868.

Now, in comparing the two series of calculations, it will be but right again to examine these somewhat in detail.

We will first take Mr. Caird's estimate, premising that it takes in Ireland, whereas our figures related only to Great Britain. We made our calculations upon the agricultural returns of 1869, Mr. Caird's were founded upon those of 1867. These are Mr. Caird's figures:—

Value of the Wheat crop of the United Kingdom	£31,500,000
Oats	25,700,000
Barley	20,400,000
Beans, Peas and Rye	7,000,000
Potatoes	18,000,000
Flax and Hops	2,000,000
Cattle and Dairy Produce	58,500,000
Sheep and Wool	26,900,000
	<hr/>
	£190,000,000

And here are the figures we gave (for Great Britain alone), estimated two years later, be it remembered, and there are of course fluctuations in crops and stock, but in the later year it may be assumed the agricultural returns had got to be more precise and accurate:—

Wheat	£36,875,000
Oats	20,870,000
Barley	19,671,000
Beans and Peas	5,826,000
Hay	40,000,000
Potatoes	8,778,000
Turnips and Root Crops	13,120,000
Flax and Hops	1,898,800
	<hr/>
	£147,038,800

Cattle	79,702,095
Sheep	56,691,746
Pigs	2,413,065
Horses	30,000,000

£315,845,706

Now, reviewing our figures by the additional light of the later returns of agricultural statistics, we will see what modifications require to be made in our estimate. The acreage under wheat, barley and oats has fluctuated very little during the last four years, whatever the crops may have done, and therefore our figures for those may stand; except that we estimated 4 quarters an acre for wheat, for, as we then said a really *good* harvest, and Mr. Caird considers that 28 bushels is the highest estimate that should be allowed. Potatoes may also stand at our estimate, and here we would remark that Mr. Caird omits altogether grass, turnips, and other root crops, which certainly should be taken into consideration as agricultural crops.

We now come to the live stock statistics, and here we are free to admit that our figures require some modification if they are to be considered as the *annual* value of the agricultural produce, for we summed up the value of all the stock returned, although we had stated previously that only about one-fourth were slaughtered. Therefore, the figures should stand thus—

Cattle	£19,925,820
Sheep	12,931,685
Pigs	1,250,000
Horses	30,000,000

£64,107,505

Mr. Caird does not include horses and pigs in his estimate; indeed, he could scarcely do so, for there were no agricultural returns of horses in 1867. But, following his calculations, we have two other items to add to the foregoing—dairy produce and home-grown wool. He estimates the dairy produce from cows in England at £10 per head, in Scotland £8, and in Ireland £7; wool he

takes at about 8s. a head for England and Ireland, and 6s. in Scotland. We have, therefore, to add—

Wool	£11,815,256
Dairy produce	20,858,700
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	£32,673,956

Poultry we pass over.

But to make our comparison fair, we must now add the agricultural statistics of Ireland, which Mr. Caird includes in his figures, and which we did not. These would be as follows, taking also the year 1869, the annual value of Irish agricultural produce—

Grain crops, 2,186,814 acres	£23,248,785
Potatoes, 1,041,837 acres	12,000,000
Beans, Peas, and Rye, 21,156 acres	126,916
Turnips and Beet, 343,009 acres	1,715,000
Meadow and Clover, 1,669,800 acres	8,449,000
Green Crops, 84,051 acres	420,255
Flax, 194,900 acres	2,088,000
Cattle, $\frac{1}{2}$, sold 1,000,000	10,000,000
Dairy Produce	3,293,934
Sheep, 1,100,000	1,650,000
Wool	1,859,263
Pigs, 750,000 at 25s.	937,500
Horses 532,657 at £10	5,326,570

£71,115,223

Now, summarising these foregoing statements, we arrive at the following data. Returns for Great Britain—

Agricultural produce	£147,038,800
Live stock	64,107,505
Dairy produce and wool	32,673,956
Returns for Ireland (as above)	71,115,223

£314,935,484

Now as poultry are not in the estimate, and there are the value of straw and other small matters left out of calculation, we believe we were fully warranted in estimating the annual value of agricultural produce and live stock in the United Kingdom at 301 millions, or fully 100 million more than Mr. Caird's estimate.

PRESENTATION TO MR. JOSEPH MEADOWS.—

It consists of a silver epergne or centre piece with vine branches, bearing foliage and fruit. Around the base are portraits of Bolivar and Charlie, the Thornville prize bulls, from the paintings by D. G. Fortune. The plinth bears the following inscription:—Presented to Joseph Meadows, Esq., Thornville, by his friends, to mark their appreciation of his spirited and successful exertions as a short-horn breeder, and of the credit reflected on Ireland by the fame of the bull "bolivar, and other animals bred at Thornville, exhibited at various leading shows in the United Kingdom." The secretary, Mr. Armstrong, read the following address: Dear sir, on presenting you with a testimonial in recognition of your spirit and enterprise as a shorthorn breeder, allow us to assure you that we take a pride in your success, perseveringly contended for, and honourably won. So long as the annals of the Royal Agricultural Society of England and Ireland are read the fame of the bull Bolivar can never die. As a mark of our respect for your high character in all relations of life, and for the effect your exertions have had in improving the stock of your own neighbourhood, as well as in other parts of Ireland, we request your acceptance of the accompanying gift, and we trust it may descend in your family for generations, to excite them to deeds of usefulness, and as a tribute to the memory of one who had been highly respected and esteemed. Wishing you the enjoyment of all happiness, we are, on behalf of the committee and subscribers, yours faithfully, William Boxwell, treasurer, Samuel Armstrong, secretary. Mr. Meadows expressed his warm appreciation of the honour that had been conferred on him, and felt honest pride in being able to hand down to his descendants such a memorial of the friendship and affection of his fellow-countrymen towards him, which was far beyond his humble deserts,

IMPORTATION OF PEDIGREE SHORT-HORNS.

The demand for this breed seems so greatly on the increase, that our home-herds cannot supply the more valuable tribes. The fact is, that those who possess them are not willing to sell even at inordinate prices; consequently our Colonial brethren and American cousins are applied to, and some animals have recently been purchased and brought over. The importation of the yearling bull, Duke of Hillhurst, for Col. Kingscote, and of the young cow, Eleventh Lady of Oxford, for Lord Dummore, in April last, has just been followed by a still larger importation of three cows and five heifer calves from Mr. Cochrane, for Lord Dummore. The following are the names and particulars:

Duchess 106th, white, calved November 30, 1870, by 8th Duke of York, dam Duchess 103rd by 4th Duke of Thorn-dale.

Duchess 107th, roan, calved December 16, 1870, by 8th Duke of York, dam Duchess 101st by 4th Duke of Thorn-dale.

Eighth Maid of Oxford, roan, calved October 18, 1867, by 2nd Duke of Geneva, dam 2nd Maid of Oxford, by Grand Duke of Oxford.

Marchioness of Oxford, roan, calved January 21, 1871, by 4th Duke of Geneva, dam 8th Maid of Oxford by 2nd Duke of Geneva.

Red Rose, red and white, calved April 12, 1867, by Airdrie, dam Easterday, by Pilot.

Red Rose 2nd, red, calved October 13, 1866, by Duke Frederick, dam Grace, by Airdrie.

Red Rose 3rd, red and a little white, calved February 15 1871, by Joe Johnson, dam Red Rose by Airdrie.

Red Rose 4th, red and a little white, calved July 3, 1871, by 11th Duke of Thorndale, dam Red Rose 2nd, by Duke Frederick.

The two Duchess heifers are the produce of Duchess 101st and Duchess 103rd, which Mr. Cochrane bought in calf last summer, of Capt. Gunter, for 2,500 gs., and the same price is now paid for their calves. Those who have seen and known both dams and calves, are agreed in their opinion that the calves are superior to their dams. Different food, judicious management, and a bracing climate, may even in twelve months have had their effect, and certainly the calves show greater substance and more vigorous constitutions, the white one being especially good, and both are very full of hair. The Oxford cow was bred in America, by Mr. Sheldon, and sold by him to Col. King, from whom she was purchased during Mr. Thornton's visit last winter in America, by Mr. Cochrane. She is a large, strong, nice roan cow, and by a very noted sire, the Second Duke of Geneva, who was said to be one of the finest Duke bulls bred in the States. This cow has a remarkably fine roan heifer calf by Fourth Duke of Geneva, a red prize bull now owned by Mr. S. Campbell.

The Red Roses have been bred in America for nearly thirty years, and are well known here as the Cambridge Rose, or Moss Rose tribe. They are descended from Rose of Sharon, bought by the Ohio Company from Mr. Bates, and the family passed into the possession of Mr. Abram Renick, whose herd of 50 strong is bred entirely from this tribe. They were described by Mr. Thornton as the best and most uniform herd he saw in America. Mr. Renick is an old breeder of great reputation, and his stock, to which he attaches great value, is much esteemed; indeed, most of the bulls that he sells become when exhibited prize winners. It is this family that is reported to have been taken out to America early in the present century, and the first-named cow in the pedigree is

called the American cow. She was, after being several years in America, brought back to England; and Mr. Bates bought her heifer, Red Rose First, by Yarborough. The two cows now imported have two very thick good red-heifer calves running with them. The cows are also deep reds, of great substance, and very symmetrical, having that fine quality and character for which the tribe is noted. The intermediate crosses used in America have always been first-class bulls, chiefly of Bates and Whitaker blood; and of late years Mr. Renick has bred his own bulls by sending his best cows out to Duke sires.

The eight head had some difficulty in being put on board the Sarmatian at Quebec. Mr. Simon Beattie came over in charge of them, and landed them in excellent order. They had a quick but heavy passage, with strong head-winds. On board they stood the journey and ate well, even in the roughest weather, but much was in the care bestowed in the fitting of the boxes. The passengers made quite pets of them on board, and many dainty pieces were put aside for the calves. At Liverpool they were reshipped into a tender, and landed at dark in a cold unprepared dock, where they had to undergo the Government regulations of twelve hours' quarantine. Taking it very quietly, the animals walked in without a bruise or blemish and looked comparatively fresh; but they soon laid down on the somewhat scanty litter that could only be obtained for them. On receiving the veterinary's approval, they were trucked again for Scotland, and arrived at Dunmore on Wednesday night, where his Lordship met them, to his great satisfaction and approval. Indeed, considering the risk and enormous expense, the county is somewhat indebted to a young nobleman, who is not only almost a zealot in the matter of steam cultivation, but who spares neither his time nor his purse in procuring the best animals of the best blood that it is possible to obtain.

Besides these Shorthorns, Mr. Cheney, of Gaddesby, has also imported some Oxford heifers and two bulls from Messrs. Walcot and Campbell's herd at New York Mills, viz.:

10th Lady of Oxford, red, calved March 23, 1867, by 10th Duke of Thorndale, dam Seventh Lady of Oxford by 6th Duke of Thorndale.

13th Lady of Oxford, roan, calved January 21, 1871, by Baron of Oxford, dam Seventh Lady of Oxford by 6th Duke of Thorndale.

9th Maid of Oxford, red and white, calved December 6th, 1869, by 10th Duke of Thorndale, dam 3rd Maid of Oxford by Grand Duke of Oxford.

5th Lord Oxford, red ball, calved August 1, 1870, by 4th Duke of Geneva, dam 2nd Countess of Oxford by 2nd Duke of Geneva.

1st Duke of Oneida, red bull, calved January 2, 1870, by 10th Duke of Thorndale, dam 12th Duchess of Thorndale by 6th Duke of Thorndale.

These animals came over in the ship New York to Southampton. One of the heifers—the Ninth Maid of Oxford, a very beautiful animal—had been exhibited at the New York State Fair, and on the voyage dropped. Although she was landed safely, she died a few days afterwards in the quarantine shed at Southampton. These losses are frequently incurred by those who visit our stocks and export largely, and are the more serious inasmuch as, the animal is invariably of great merit. It is, however, to be hoped that Mr. Cheney's investment with the others will in the end be more fortunate, and in a degree compensate for this loss at the outset.

SHEEP BREEDING AND MANAGEMENT.

BY THE NORTHERN FARMER.

If care has been taken to preserve the pastures moderately rough, the ewes will be able to keep themselves in good condition, without the slightest assistance, until the period of gestation is far advanced; but, however well-conditioned, it is good policy to begin to give a little food in addition to the grass, at least six weeks previous to lambing time. This, besides being favourable to the health of the flock, gives the lambs strength, and they will be dropped strong and hardy, very soon getting the use of their limbs, and the weaklings or culls will be reduced to the smallest possible limit. The food given may consist of the softer varieties of turnips, such as the Pomeranian, grey stone, and yellows, together with a little sweet hay (sheep will eat no other), given in racks so constructed that there will be no waste. A good rack soon pays itself by the mere saving it effects in the consumption of the hay; and no motives of economy, however laudable in other respects, should be permitted to interfere with getting an article for this purpose of the very best construction. The object being to preserve the animals in healthy condition only, fattening foods, such as Swede turnips, cake, or corn, should be carefully avoided until they have lambed, so as to lessen the danger of casualties at that critical period. When fairly started, and the lambing season safely over, bulky food may be given without the slightest danger in as great quantity as the flock will eat, provided it is given regularly. It is in consequence of deviation from this wholesome rule that deaths occur amongst breeding ewes when suckling their lambs, and not from anything injurious in the food itself. Although there is not actually much necessity for it, if bulky food is abundant, a little crushed oats may be given daily, as it to some extent corrects the waterish nature of the grass and turnips, keeps the wool and flesh firm, and in every way aids in preserving the animals in good health.

During the period of lambing no reasonable assistance should be grudged in attending on the ewes both during the day and night, as a little extra care for a few weeks at this time will be paid over and over again by the lives saved, to say nothing of the mental satisfaction which is the invariable accompaniment of success. The feeble little creature newly ushered into the world, it may be on a night of fierce wind or rain, stands but a sorry chance of surviving, unless some friendly hand is near to remove itself and dam to a place of shelter, rendering all necessary assistance until sufficiently strengthened to be able to find the teat easily of itself. Unless constant care of this kind is exercised, a heavy per-centage of the lambs will be lost, many ewes manifesting the greatest indifference to their offspring, if weak or unable to follow. This is more particularly observable in the case of twins, the first dropped being very frequently the strongest and most precocious, and the mother showing the utmost partiality to it, and neglecting the weakling if the latter is not attended to and assisted to suck until it gathers strength.

Highly-bred ewes of the white breeds, even although they may afterwards milk moderately well, are often several days before they come to their milk, the lambs in such cases maintaining only a lingering existence, and losing much of their strength before the mother is able to support them. The shepherd should have milk at com-

mand during the lambing season; and if the position is isolated and the flock large, a cow should be placed at his disposal, so that he should have no reason for being absent from his post. Liberal measures of this kind—viz., plenty of assistance and abundant food—will bring their sure reward at weaning time, the number of lambs in proportion to the ewes being so vastly greater than could possibly be the case under the system of semi-neglect which must inevitably prevail when the shepherd is overworked and unprovided with the necessary aids for the successful carrying out of the extra duties devolving on him at this time.

From the period of lambing until the day of separation the ewes should never want food at will, this rule being of such importance that it cannot be urged too frequently or pointedly. When the food supply is kept up without stint, the flow of milk is uninterrupted. The lambs, having abundance of food, never stop or recede in growth or condition; and on the day when they are turned into cash the extra price per head over other lots not so well cared for, although equally well bred, will be so great as to demonstrate without the slightest chance of mistake or evasion what system pays best—whether liberality or niggardliness.

A mistake is sometimes made by keeping a large number of sheep in one flock, whatever the size of the fields which form their pastures. If the range is large in proportion to the number of stock, the drawbacks attendant on the practice are not so noticeable; but when kept in one lot in small enclosures, there unavoidably follows a considerable amount of inconvenience and positive loss. It pays to have the fields well fenced, so that the flock can be divided into small handy lots, as, in the first place, more stock can be kept, and the sheep are healthier on account of the grass being clean and fresh, a large flock in proportion to the acreage of a field soon rendering it foul, by being thoroughly impregnated with their droppings. Rank grass, forced up quickly from the latter cause, is a fertile source of scour; and much loss from debility, waste of condition, and death is the inevitable consequence when sheep are constantly kept on a limited range, and afforded no variety of food. The paths made by a large number of sheep following each other in succession, which is their invariable habit, become also a cause of loss, much of the land being trodden into pathways, to the utter exclusion of vegetation. For these and various other minor reasons it will be found in practice much more satisfactory to keep a flock of sheep in several small lots, rather than in one large one. In every way they are more handy to manage; and diseases of the feet or skin are much more easily combated, should they unfortunately break out or be introduced to the pastures.

There are two modes of dealing with a flock of sheep now prevalent; the one is to clear off the lambs from the mothers; and the other to hold over, place on turnips, feed liberally with the aid of concentrated food, and sell when from twelve to fifteen months old, either in or out of the wool, as may be found most convenient, the shearing becoming peremptory should the sheep be held until the season is advanced. Both methods have numerous followers, the arguments adduced on each side in support of the favourite theory being nearly always

sound, for the excellent reason that in practice most men find out what pays best, and, adhering to a certain course of management for a number of years, become adepts in that particular branch of husbandry to which their attention has been confined.

To get rid of lambs profitably at the age of from three to five months, the land on which they are bred must necessarily be of good quality, possessing natural advantages in the way of shelter, kindness of soil, and early spring of grass, which, combined with liberality in providing extra food in early spring, make success as nearly as possible a certainty. Feeding off on turnips, on the other hand, can be adopted on a much greater variety of surface, being in point of fact suited to most soils, from the deepest loam to the thin, brashy soil of the moor or hillside scarcely reclaimed from a state of nature, and where, from severity of climate, it becomes absolutely imperative to have the lambs born at the very period when those reared on low-lying and sheltered farms are being converted into cash.

The possibility of bringing waste lands in situations inaccessible to other modes of reclamation into profitable culture, by means of turnips grown with portable manures and fed off with sheep, has made this subject one of national importance, and those men who have devoted their time, capital, and energies to this branch of agriculture, deserve well of their country, and should be considered in the light of its greatest benefactors. Lambs bringing highly remunerative prices from the end of April to beginning of July, the system of clearing out the whole of the season's lambs at that period has been very generally adopted on the better class of soils, the mixed system of husbandry suiting admirably, as by its means, a good bite of succulent grass can be calculated on in very early spring, when confinement to old pastures would be little better than starvation. A farm growing a considerable breadth of green crops every year, can keep a very large stock in proportion to its acreage, every season being amply provided with food. A farmer can scarcely find himself in a worse predicament than that of having more stock than he has food for. Yet, notwithstanding all danger, trouble and loss that constantly occur from overstocking, it is the large number that is most profitable. If a farm is kept understocked, so as to avoid all trouble or outlay, in providing extra food in the spring months, when vegetation is parched into dormancy by sharp frosts and chilling winds, the stock having to subsist altogether on the rough grass which was rejected in the season of plenty, it must be very good land indeed that will make capital so expended a profitable investment. Rent, taxes, and attendance run up an unavoidable bill, which will consume all the profit yielded by a light stock, leaving not even the narrowest margin for interest of money, depreciation of market value, or losses from accident and disease. My own experience is altogether in favour of a heavy stock in proportion to the acreage, it alone on the general run of farms will pay, but it cannot be sustained, unless the supply of food is abundant every day throughout the year. The grass land on a farm worked on a six or seven year's course, has not time to become poisoned by the excretions of sheep, however great the number kept, therefore when a heavy stock is kept and liberally fed, the profit is twofold, first on the animals and their produce, and second by the manurial improvement they effect on the soil on which they are fed in such large numbers, and the large quantity of external food which they consume. By the labour-grudging system, but a moderate stock can be kept even on the best land, and they are fully fed only in the height of the grass-growing season, the winter and spring being long and dreary both to the animals and their owner, instead of being the pleasantest and most cheerful period of the

whole year. By growing turnips, mangolds, cabbage, tares, rape and rye in considerable quantity, and securing heavy crops by careful culture and abundant manure, a very large stock of sheep can be profitably held in proportion to the acreage—the number indeed so great as to be seen to be believed or properly understood, the soil is kept constantly improving in stamina and crop-bearing capability, and the man who has the spirit and intelligence to carry out the full feeding system, both with the land he holds and the stock he owns, will seldom fail to place himself in a position of independence. Rather than let the ewes go back in even the slightest degree when suckling their lambs, it is better to purchase a few weeks' supply of food, if there is the slightest prospect of the home-grown running short towards the end of the season. Whatever the expense it will be repaid over and over again, if by its aid the lambs are kept progressing, and not permitted either to stand still or recede. Either of the latter results will inevitably happen if the milk is suddenly shortened in quantity, by the ewes being compelled to trust wholly to the pastures for support, before growth has been sufficiently advanced to yield them a full bite. A dry April and first half of May is a very trying time for the owners of a large breeding flock, unless he has had the foresight to prepare for such an emergency; this done however, he tides over the period of difficulty with perfect ease, and reaps a well-earned reward in the superior condition and consequent high value of his way-going stock.

Adhering to the principle that it is the heavy stock that pays best, it becomes the duty of every farmer following this course to work out the largest possible sum for each individual member of his flock, as constant care, abundant food, and intelligent management will extract. Loss of capital on the disposal of cast ewes should be carefully avoided, as if this is permitted it seriously lowers the year's receipts, and leads to discouragement. With the high prices of late years realised for mutton of all qualities, there is no necessity for selling old ewes anything at all under the price of those purchased to take their place; all that is required to work them up to the same, or even at times greater value, being a little attention in providing suitable food. This is best accomplished by sowing down a few acres of rich land with clovers, grasses, and rape, without a corn crop, netting the sheep on this in autumn, a very few weeks on such succulent food rendering them thick fat without cake, concentrated food, or medicated mixture of any kind whatever. Assuming that the sales of old, and purchases of new ewes balance each other, and that there are no losses, but those arising from the usual casualties inseparable from the management of a large flock, the question naturally arises, What is a good average for a breeding ewe to make during the season? To fully illustrate my ideas on this very interesting question, I shall suppose a farm of 400 acres worked on a sound system of convertible husbandry, on which there is a large dairy stock, a proportionate number of calves, yearlings, and two-year-olds, working and young horses of different ages, and a stock of 200 breeding ewes of a good kind, costing from 50s. to 60s. each, when purchased in September. I shall further suppose that the whole of the season's lambs are cleared off within six months, the first sale being made early in May, sooner if found profitable, and the final clearance made not later than the middle of August. Such a heavy stock cannot be kept without growing root and other green crops on an extensive scale, and I therefore consider that its receipts ought to come as near as is necessary for the end in view, to the highest productive powers of a good sized fairly bred flock, whose progeny, with but a few choice exceptions, is destined for the butcher at a very early period of their existence. Although there may be considerably more births, it may

yet be accounted a very successful issue if 250 lambs are sold from 200 ewes, a certain number always succumbing to curd on the stomach, hair-balls, foxes, and accidental injury. The lambs being dropped early, and properly nourished from birth, will be in the market when the price is at its highest, easily realizing an average price of 32s. each. I am aware that many men do even better than this, but the figure stated is a very fair one, and will not be reached without liberality and care. The ewes largely benefited by abundant food will grow good fleeces, weighing on the round about 6 2-3rds lbs., making at 1s. 6d. a pound, 10s. for each. The total receipts stand thus:

	£	s.	d.
250 Lambs at 32s.	400	0	0
200 Fleeces at 10s.	100	0	0
	<hr/>		
No. of Ewes 200)	500	0	0
	<hr/>		
Average for each ewe	£2	10	0

This I consider an excellent return when a full stock is kept, and I repeat as my firm conviction that it is only the large number worked up to such good condition as to command the highest price of the day when disposed of that will pay.

CHAP MONEY.

At the annual meeting of the Banbury Chamber of Agriculture, the Rev. C. HOLBECK, the chairman, said their business was to consider the circular of the millers and dealers relating to chap money, which was that they proposed to substitute a month's credit or a month's discount, the former being the usual London terms.

Mr. WESTOVER said he gave notice at the last council meeting that he would bring this matter before the chamber. He said they were very much indebted to Mr. Miller for the able manner in which he brought forward the subject, and the efficient way in which he carried it out. He (Mr. Westover) did not stand there as the representative of those gentlemen who sent the circular out, but he had had some conversation with some of them, and it was found to be very difficult to carry out the resolution passed by the Board on that subject. There were two reasons why they should consider the circular. He thought it would be uncourteous to allow the proposal to pass unnoticed, and another thing was that he thought it would be very undignified to allow themselves to slip into their old channel without discussing the proposal. If they found they were beaten let them acknowledge it. The reason they were beaten, if they were beaten, was that they could not carry out the resolution for want of support in the neighbourhood and district. It might have been successful if other places had begun a similar movement when they did; but it was a very difficult thing to refuse dealers custom when they purchased corn in Banbury market, for they had to give it elsewhere. One dealer said a month's credit meant one month beyond the ordinary fortnight. (Mr. SMITH—"That is not London terms.") Another dealer told him that it meant a month from the day when the purchase was made. A month's discount meant 5 per cent. He had also been told that the tradesmen gave the very same discount for cash, but then they could put on their profit after calculating the cost of production, and sell accordingly. But they could not do so, for their price was fixed for them, and they must sell at market value. It was no argument to say that they could give discount the same as tradesmen. Five per cent. for one month would be one penny in the pound. He quoted the following figures as showing the difference between chap money and discount:—

Qrs.	s.	£	Chap Money.	Discount.
20 barley at 35—35			4 0 } Ss.	2 11 } 6s. 3d.
20 „ at 40—40			4 0 }	3 4 }
20 wheat at 42—42			4 0 } Ss.	3 6 } 8s. 2d.
20 „ at 56—56			4 0 }	4 8 }
20 oats at 20—20			4 0 } Ss.	1 8 } 3s. 8d.
20 „ at 24—24			4 0 }	2 0 }

It seemed to him that the more equitable way would be to give discount of 1d. in the pound.

Mr. R. POTTER said he had signed the paper, and he should stick to it.

The CHAIRMAN said that Mr. Simmons had received the following telegram that morning from the Secretary to the Central Chamber: "The Central Chamber can't consider the subject at present, but hopes that you will not abandon the movement until the other chambers which have taken action in the matter have been communicated with."

Mr. BERRIDGE: It seems from that that the question has been taken up.

Mr. HADLAND would be very pleased to support the abolition of chap money if it could be carried out generally. He found that the resolution they had passed was working very impartially and very objectionably. A great many gave chap money, and others did not. Some gave it who signed the paper. He moved "That in the opinion of this meeting the new system with regard to chap money, being only partial, does not work satisfactorily, and therefore we think it right to release from their pledge all who desire it; but if the Central Chamber of Agriculture (from whom we think the proposition ought to emanate) should at any time adopt it, and it is generally carried out, we pledge ourselves to its support."

The motion was not seconded.

Mr. DAVIS said he was one of those stubborn men who refused to give chap money. He had neither given it nor taken it, and he had found no difficulty in it. He had given a month's credit, and he did not intend to give chap money unless it became a general rule in the market. They should not return to the old system, and he suggested the appointment of a committee to meet the millers and see what should be done.

Mr. GARRETT said he had accepted the terms of the millers, and sold some corn and waited a month for the money, and then they wanted chap-money. The present system did not work satisfactorily.

Mr. R. GARDNER said that some of those who signed the circular would not agree to it. The Woolgroves said they had plenty of money of their own to carry on business with, and they did not want a month's credit. The matter was a very difficult one. He had taken his corn to Birmingham market, and had taken chap-money there.

Mr. DUN suggested that pending further proceedings they should take the compromise offered by the corn dealers and merchants.

Mr. BERRIDGE said that would leave them in the same position as they were now. He thought they were in a very small minority in the matter, and unless the principle was acknowledged by the Central and other Chambers throughout the country, he did not think they would do away with custom. They should wait and see what the Central Chamber did.

Mr. WALTON thought the subject was one in which the Chamber had no right to interfere. They should let Banbury market take care of itself; it was quite able to do so. They could not do away with custom in Banbury, and if they did it would give a fictitious rise to the price of corn in Banbury market. There would be a fictitious rise of 2s. on every ten quarters sold in Banbury.

The SECRETARY could not agree with Mr. Walton that the Chamber had no right to take the matter up. The object of such Chambers was to rectify abuses, and chap-money was one.

Mr. RUSLEY moved that the consideration of the question be adjourned, and Mr. Simmons get information what other Chambers are doing in the matter.

Mr. WESTON seconded, and the motion was carried.

Mr. WESTOVER—In the meantime we remain on strike.

THE MANAGEMENT AND BREEDING OF STOCK.

At a meeting of the Breconshire Chamber of Agriculture, the Rev. Garnons Williams, president, in the chair,

The Rev. Canon BEEVER said that he could not do more than give a few suggestions gathered from his own experience, hoping, at the same time, that the flint struck against the steel of their own experience might elicit a spark which would produce a flame, and induce a discussion whereby both would be benefited. In the first instance he thought of speaking on the general management of a farm, but that seemed such a wide subject that he could not do justice to it in a single address. There were, however, one or two remarks he wished to make at that stage, and upon that subject, viz., that during the past few hours he had seen farms as well managed, and with as good stock as he had seen in any part of England. There was, therefore little or nothing to be taught on that point. He had no doubt there were farmers amongst them who took advantage of those things which gave increased production. Of course success depended in the first place upon sufficient capital at command and placed in the soil; and that, backed up by energy, which ensured the land being well ploughed in good time, sown with the best seed, and having the best management, would, under ordinary circumstances, be followed with success. But there was also another matter he wished to put before them, though most of them might know it, and it was in reference to Mr. Lawes' theory about soils. His theory was this: that soils, like men, possessed certain specialities—idiosyncrasies so to speak—that is, special aptitudes for growing different kinds of crops. For instance, he found when speaking to old farmers, who could scarcely read a book, they had learned from practical experience that different soils possessed distinct specialities. On his own land, for example, one field would grow better wheat than another; a second would grow better barley; a third better oats; and a fourth better root crops. Mr. Lawes recognized what experience had shown, and he also went still further and said, supposing a field grew fifteen bushels of wheat per acre without manure, it was possible to make it produce more by the aid of manure; but without manure, and if cultivated, it would always grow fifteen bushels and not less. It was quite possible that the produce might be increased to thirty-five and forty bushels, as was done by high class farming, and different farmers might drop the amount from forty to thirty-five, but they could not reduce it below what might be termed its natural yield, or its natural aptitude. The next field might grow twenty-five bushels, and they could not reduce it below that amount. They might improve it and they might reduce it, but they could not exhaust the soil below a certain yielding power, and between the highest and lowest limit was the scope for good farming. Now he presumed what a young farmer ought to do, and what he would do if he were beginning farming, was to find out on taking a farm from those who had lived on it what special aptitudes the land possessed; and having ascertained that, he should next consider whether he had sufficient capital to work it properly. The rule of a certain landlord was, "Show me your capital and I will let you a farm." For himself he thought a capital of £10 per acre was not too much. But he wished to impress upon them, the extraordinary fact of the aptitude of soils, and said that if a man wished to succeed he had better ascertain the aptitude of the land he was about going to. Then necessarily another important matter was with regard to the breeding and rearing of stock. Mr. Frank Buckland and others had tried to introduce all sorts of birds and cattle into this country from those in which they were climatised, but Mr. Buckland himself had told him that the experiment had proved a failure. And therefore his advice to those commencing farming, and what he himself would follow if he were beginning, was to get the best stock of the neighbourhood in which the farm was situate, and in that respect Mr. Buckland said the farmers of this country had a grand field for improvement. Now supposing he took a farm in that county he should endeavour to become acquainted with the stock kept by the leading farmers, and also the special aptitude of the soil

from those who lived in the neighbourhood of the farm he proposed to take, who necessarily were better acquainted with it, and in that way he should derive very valuable information. He should probably find that the flocks of the county were a special feature, because Breconshire was somewhat noted for its sheep; and certainly, from what he had seen, justly so. His object, therefore, would be, whether on a hill or a lowland farm, to improve the breed of his sheep, so as to make them give better fleeces, more flesh, and possess hardier constitutions. With regard to pigs, they were not a local breed; the different kinds being found everywhere, but he would not go in much for any of them. Horned stock, he observed, appeared to be closely related to the soil; inasmuch as the different breeds were peculiar to their own distinct part of country. He might be wrong, but he believed that if he took pure-bred Herefords and turned them out in the black cattle country, without allowing them to be crossed, they would, after a long term of years—say a hundred—be found to have grown into and have assumed the type of black cattle. Here was an instance: An old friend of his in Carmarthenshire commenced breeding Shorthorns, and for that purpose bought the very best representatives of that type; but the result had been that they had assumed the exact shape and appearance of the black cattle, though certainly they were not of the same colour. He asked him how he accounted for it, and in reply he attributed it simply to the soil, and said he had watched them change gradually until they had assumed the type of the cattle of that county. And, again, if they took Devonshire cattle into the Shorthorn country, and turned them loose for a hundred years, their characteristics would be of Shorthorned stock. However, as he had said, he had nothing to teach them; he should say to a young farmer coming into a fresh country, "Choose the best stock around you." For example, he saw a flock of sheep the day before from which he might choose twenty animals, all of them of the most beautiful type; and having done that, he should endeavour to make his whole flock, by judicious cross-breeding, as perfect as possible. That is, he should fix a certain type for himself, and try to reach it with his entire flock. He instanced that an eminent breeder came to the conclusion that Southdown sheep were not the most profitable, and to make them more so he crossed and re-crossed, always keeping before him a distinct type to attain to. And so again with horses. If they wanted a good breed they must begin by getting a mare of character, as fine as possible in every point, and perfectly sound. He was glad to say they had an excellent breed of horses in that county. But he had seen horses that were not of such an excellent type, and instanced that one to which a prize was awarded at an agricultural meeting he attended had not a single good point about it—at least what he had been taught to consider good points in an animal. It would be useless to try and get a good breed except the animals were good on both sides and even when they had a good male and good female they might be disappointed. At first they might be exceedingly lucky, as several notable breeders had been producing such animals as the Bloomer mare, Stockwell, and King Tom; but he had a friend who had bred a hundred mares who had never managed to breed a good one, yet he was a first-rate judge and went in for horses, but he was not fortunate, and gave it up. Then again there were small breeders, who perhaps with two or three animals made a really good thing out of breeding. Now, what he should recommend the young farmer to do would be to endeavour to purchase from his neighbouring farmers some old female animals of known character; and for sires he should recommend him to go to an eminent breeder and see if he could get hold of something, within his means, known to be the sire of something first-class; and having done that and fortune favoured him, it was more than likely he would be successful. But if he were not successful he could only say that his experience had shown him that there was no certainty whatever in breeding horses. A breeder might have a splendid carriage mare, beautiful to look

at, fine in action, and possessed of great inherited qualities, yet the foal she brought should not be fit to be looked at; whereas, at the same time, a man occupying the next farm might have a famous trotting thing which would produce a foal which at three years old would sell for fifty or sixty guineas. For sires, however, never let them try to use cross-bred animals. They should go in for purity of blood. The Arab, who got rid of everything that was not perfect to his skilled and trained eye, taught them that lesson. The first cross of any animal he knew was always beautiful. For example, the crossing of a Southdown with a Cotswold would produce in the first instance a beautiful animal, but if it was repeated they would agree with him that the result would be disappointing; and he could not do better than repeat that whatever sire they employed it should be a pure-bred one. He next came to the question of how to introduce pure blood; Eminent breeders, went to other breeders, sparing neither time nor expense, until they secured a cow to their own liking, and after four generations breeding in and in they managed to introduce and gain her constitution, at the same time investing her progeny with their own desired type and outward appearance. He had a visit a month ago to an eminent breeder's, where the process of improving stock and obtaining a higher and better type of animal was being carried on, and he advised that during the period of gestation all kinds of stock should be well housed. He did not mean that it was necessary they should be kept in confined buildings, but certainly they ought to be sheltered from the rain, and also to be well fed. One of his neighbours, who was really one of the best sheep-farmers he knew, and who loved it, had had a great mortality amongst his lambs this last season; he believed he had lost one hundred and sixty, whilst he (the speaker) had not lost one. It was not that he paid more attention to his sheep; but the real secret was in what the surgeon said to him, that he had kept his ewes too low. Now that exactly agreed with his own experience, and if they allowed their ewes at a certain season to run on stubble to pick up what they could get, the probabilities would be that they would have a great mortality amongst their lambs; whereas, if they fed them well, the result would be far more satisfactory. His next point was as to rearing the young. With regard to horses, they could not treat them too well; young horses especially required to be fed well, and being so they would repay their owners. If people would only eat horse-flesh it would be, he thought, a great blessing to the country, for the reason that we should not have such prices in the market for butcher's meat if, when they had a spindled-shanked good-for-nothing two-year-old colt, it was sent to be slaughtered. Everybody had a natural love for horses, and if the antipathy to eating them could be got over, the consequences would be that, if all the bad ones were sent to the market, we should have the finest accumulation of horses—because we had the finest breed in the world, that was, he repeated, provided all the screws were killed and eaten. Calves, also, required to be treated well. A friend of his had a splendid lot of Shorthorns, but he had managed to get a miserly bailiff, and the result had been that he had got a lot of pot-bellied calves, not worth 17s. 6d. each; but, if mother and calf had been treated well in all probability they would have been a fine lot of healthy calves, which, when they came to two years old, would well repay the little extra cost incurred by a more liberal management. The late Mr. R. Booth, one of the finest judges of stock, said to him, "What would you have the mother's milk for, but for the calf?" and advocated that the various foods suggested to be given, should be given through the mother, as if so, the calf would possess an increased richness of blood. Regarding pigs, he might make them acquainted with a dodge worth remembering. Most of them knew that if they had a sow which had not enough milk for her litter, and they gave skimmed milk to the little pigs, the chances were a thousand to one that a lot of them would die. But, by mixing Epsom salts in a proper proportion, its prejudicial effects would be prevented. Skim milk made them costive, while the mixing of Epsom salts with it gave it an opposite tendency. He had only one other suggestion to make, and it was that they should go in for a distinct stamp of stock—say like the Suffolk farmers and breeders had done. One eminent breeder of that county got 600 guineas for two cart mares, and why should they not do the same? Then with regard to their sheep they had a distinct type, and it should be their endeavour to improve it in the same way as other breeders had improved their flocks, and

and who now realised high prices for them. He mentioned one farmer who began life as a labourer's son, but who had applied himself to the improvement of stock, commencing in an humble way, until he had derived great profit from it, and was known as one of the most eminent breeders in the country. The Suffolk horses and cattle had become famous because the breeders and farmers in that county had set before themselves a distinct type to attain to, and now their horses and cattle were as much like one another as they could possibly be. They, in Breckonshire, were celebrated for their cart mares as well as their ponies, out of both of which they might make a first-rate thing, and he instanced that he remembered £84 being given for an unbroken three-year-old colt from that county. He advised that in order for the improvement of their cart mares and ponies they should unite towards attaining a distinct type, towards which they should get rid of all the bad three-cornered animals, and only breed from those that were the best of their kind. From what he had seen since he had been in that district, if he had only a hundred of their ewes, such as he could pick from farms of the neighbourhood, and if he had two or three of their cart mares, as well as other stock, he should be as happy as a prince, and he thought he should hardly ever go to bed for looking at them.

The CHAIRMAN had read of a man who had such an extensive knowledge on different subjects that he was termed many-sided, and he thought the same would apply to Canon Beever, who was a very uncommon many-sided man. They saw him that day as a farmer possessed of all the knowledge which modern science had brought to bear upon farming, and yet in addition to that knowledge gained from books he did not despise the old beaten road of experience. Another day they might meet him holding his own amidst the best scholars of the time in academic circles, and another day exercising the duties of his most sacred and responsible office as a clergyman, and again exercising most responsible duties as examining chaplain to one of the Bishops of the Church; and he thought they might very properly learn a lesson from him in that respect. He begged to move a vote of thanks to Canon Beever for his most interesting and instructive lecture, and he would also add that he hoped it would form the basis of one of those interesting books he had been accustomed from time to time to publish, and which a reviewer stated contained a perfect *valet mecum* for the farmer.

Mr. ALEXANDER WOOD seconded the motion. The conclusion, he took it, the lecturer wished to impress upon them was that they should endeavour to improve the stock of the country. He was happy to think that in that county they had several kinds of stock that were peculiar to that county, and he hoped circumstances would not tend to diminish the characteristics which those animals now possessed. At the same time he must say that he noticed a great change was taking place in the county. He observed that many breeders of cattle and horses were becoming cattle dealers, and some of them would say that they preferred the nimble nippence to the slow shilling. Of course, farming was conducted for making money. The farmer occupied his time and employed his capital the same as mercantile men, to make money. He could conceive, considering the facilities now given for the transit of stock, and in consequence of the increased prices for the same, that there was a great temptation to a man who was a breeder to become a dealer in cattle. But there were peculiarities in the county of Brecon that he believed in the long run more money would be made by breeding than cattle jobbing. For example, they had districts in the county that were peculiarly favourable to the breeding and rearing of cattle. The rev. lecturer gave them a very wise suggestion as to the care which should be given to animals. Not being himself a landlord he was afraid to speak, but he considered more attention should be paid to farm buildings. There could be no doubt that in wet seasons, sheep, horned stock, and in fact all animals liked to be covered, and there could also be no doubt that the condition of animals would be greatly improved if in wet weather they could go into places of shelter, and he believed if provided it would be found that all animals would do so. In that county he knew there were many who had employed their capital for that purpose, but he thought it might be still further extended. And he noticed that in Leicestershire, which is a breeding county, huge sheds were very generally erected on farms into which animals could resort, and they did so immediately when

storms came on, and it was found by spreading lime in the sheds that animals affected with the foot-rot were not only entirely cured, but that the disease was prevented from spreading. There was another subject the lecturer dwelt upon, namely, in respect to the horses of that county. He spoke in high terms of the quality which might be obtained at Talgarth Fair, but he was sorry to say he now saw very few of those famous animals for which the fair was formerly celebrated. But he hoped that the time would come when its characteristics would be revived. At the present time, however, there was scarcely a pony ever exhibited for sale that had got any shoulders which they used to see; and he was sorry to say that a great many little things of three years old were exhibited with foals. He regretted to see that because they could not expect constitution if their ponies were made to have young at so early an age, and it must tend to degenerate the character for which the animal was known. He noticed that the ponies of North Wales had a reputation for being strong and as possessing good limbs, and were of great service to the tenant farmers of that part of the principality. In fact those ponies had won so much of a reputation that at one of Mr. Tattersall's sales as much as £80 to £100 were realized for exceptional animals. Now he did not see why they should not have as excellent a breed in South Wales; what they wanted was to get good sires. With regard to farm horses they had, he believed, some very good specimens; and an enormous quantity was required for the works in the county. He maintained that Breconshire cart horses possessed distinct characteristics, and were not only known in the county for their good qualities but far and wide beyond. He understood that a prize had been offered, by Mr. Crawshaw for competition at the next agricultural meeting, and no doubt when it was published there would be many competitors for it. The giving of prizes he believed would tend to the improvement of the breed, and he thought the next show of the county society would be a rather remarkable one.

Mr. OVERTON said that Mr. Crawshaw's prize did not include the animals mentioned by the previous speaker. He himself offered a prize at the last show for that kind of animal, but he was sorry to say there were so few competitors—only one—that he should not continue it.

Mr. DAVID DOWNES said what Canon Beever had remarked respecting their cart horses he could fully bear him out that twenty years ago they had really first-class cart mares. [Canon BEEVER: That is the time to which I refer.] But at the present day he must say that he did not know where to look for one. Why was that? It was because good sires were few and far between, and had it not been for their friend Mr. Williams, who went to Ross and brought back a good entire horse, they would have been worse off still. He agreed that it was essential they should endeavour to get well-bred animals, and improve the breed of those they had. With regard to cattle he might touch more upon them than upon horses, and he could not but say that he quite agreed with the lecturer in respect to keeping the flesh upon the back of the calf. That, indeed, was so important that it should never be lost sight of, for once stint the calf and reduce the flesh gained by its mother's milk, and it would be ruined for life. His advice too was that they should be kept properly housed, but not in too close and badly ventilated buildings. And not only that, it was essential that a farmer should keep a sharp look-out upon his men, and see that his directions were properly carried out. It was all very well to farm for pleasure, but let them show him the man that did not like a little profit as well. There was another point noticed by the lecturer, and one which he thought Breconshire farmers ought to pay a great deal of attention to, and that was in reference to their sheep. The lecturer said that their ewes should be well protected, and they must agree with him that that was very essential, because he was sure if they allowed their ewes to get into weak condition by short feeding during the winter, the lambs they brought in the spring would also be weak and diseased, and the mortality would be greater amongst them than if the ewes had been well attended to and in good condition.

Canon BEEVER understood a prize bull of Sir Joseph Bailey had died; and he asked whether it was their experience with prize cattle that after being forced and then dropped they were liable to disease of the lungs. He understood that prize cattle kept for ten or twelve years and fed and dropped repeatedly were liable to a certain well-known disease, and that it

was the experience of those who kept these animals that when killed their lungs were a mass of corruption.

Mr. DAVID DOWNES said his own experience taught him that that was so. He recollected some three years ago there was a great competition at the Brecon Agricultural Show, and his brother exhibited an aged bull which won a prize, and which for these shows he was in the habit of forcing and then dropping. But he maintained that the flesh was not taken off judiciously: the animal was stinted in its food, and it ought to have been walked every day. But that was not the case. The consequence was that when the animal came into his possession, and after keeping it two years it only got him two calves. When dead, its lungs were quite rotten and full of hard knots of a chalky substance. He attributed it to the fact that, after forcing, the flesh was taken too suddenly off the animal.

Mr. FERRIS, veterinary surgeon, described the disease referred to.

Mr. OVERTON said it had occurred to him that every farmer should consider the important circumstance, when rearing stock, of its aptitude to the particular locality in which he was located. The Shorthorns were peculiar to Yorkshire, and the Herefords to that part of the country; and it really appeared that there was a certain adaptability of those kinds of stock for their own tracts of country, and if either were transferred from its own soil it would not flourish so well. He believed many attempts had been made to introduce Shorthorn stock into Breconshire, but those attempts had not been attended with success. There were a few instances in Monmouthshire where Shorthorns had been introduced, and after being pampered and protected had done tolerably well, but he did not think it would have been so if special and particular attention had not been paid to them. The only conclusion that he had come to was that there were certain kinds of stock adapted for certain localities and climates, and therefore the first object of the farmer should be, wherever he took a farm, to find out the kind of stock calculated to suit, thrive, and flourish on his soil. He knew of no more striking example of that than in respect to the black cattle of Pembroke-shire. He knew that some time ago large droves used to be purchased and sent into the centre of England; but the result had shown that black cattle did not thrive anywhere so well as in their own country. In fact stock, when removed from the eastern coast to the western coast did not thrive, neither did stock removed from the western to the eastern coast, but both succeeded best in their own tracts of country.

Mr. SMITH rather inclined to the opinion that black cattle would do well in that country, and said that in Carmarthenshire he had seen some beautiful black stock. He believed black cattle, if they were done well to, would thrive equally with Herefords and Shorthorns in that county.

The meeting then separated.

HEADS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—I see that in Mr. Corbet's paper on HEADS, he finds fault with the judges at a Smithfield Show for giving a prize to a Highland ox with a bad head. Now, what I want to know is, have they a choice in the matter? At a show of breeding animals, the head is, of course, a matter of very great importance; but in a show of fat cattle, would the judges be allowed to consider anything but the carcase? I ask for information, as I am to be one of the judges at a fat cattle show.

Yours, truly, A. B. C.

HEADS.—Arrangements are being made for an Exhibition, or rather standing collection in St. Petersburg of the heads of all the improved breeds of animals.

MR. J. A. WILLIAMS, OF BAYDON.—Mr. Williams is about to leave Baydon, and his friends propose presenting him with a testimonial in indication of "the respect and esteem in which he is so universally held, and the great interest he has always manifested for the welfare of agriculturists."

THE WENLOCK FARMERS' CLUB.

At the annual dinner, Mr. R. J. More in the chair, COLONEL CORBETT, M.P., said: The Government did not want, of course, to stop the importation of food for the people; and it, therefore, waited till the very last moment before it pulled down the safety flag and prohibited the importation of cattle from infected places, so that some amount of disease would be imported before the importation was put a stop to. If the cattle were killed at the ports of landing that could not occur. He believed there were very wrong ideas in the minds of the consumer upon that subject, that made him press for what they term a free trade in foreign cattle. The consumption of foreign meat was only five per cent. of the whole consumption of the country. The subtle nature of those diseases were such that it was difficult, if not impossible, to tell what loss was created by the importation of diseases by foreign cattle; but he did believe that more than five per cent. of British-grown meat was lost by their importation. There was another class of people who were very hostile to the prevention of the free introduction of foreign cattle. He meant the people at the ports where such cattle were landed, and who pressed their representatives to oppose all restrictions upon it. The more cattle that were imported the more grist was brought to their mill, and they did not care how much disease was imported. He did not by any means wish to stop the importation of foreign cattle absolutely, but he thought they ought to go through a longer quarantine, or be slaughtered at the ports. He had no doubt that would reduce the number of cattle actually imported, but he believed that instead of the consumer being the loser he would be a very great gainer. The tenure of land was a very important question, and it was one that had been very ably discussed at a meeting of the Chamber of Agriculture for the county; but he thought that was not the time or place to enter into a question such as that. Referring to some of the various proposals for settling this question, supposing the State did buy up all the land in the country, and sold it again in lots to people of small means. They heard a good deal now of every man having his own cottage, in "the open." But supposing an artisan, earning £3 a week or so, had a cottage and a few acres of ground. He would not be likely to make it pay, and the result would be that he would let his house and land at a rate which it would pay nobody at, and he would go back to the town, earn his three pounds per week, and become another instance of a non-resident landlord. Then what would it cost the State to buy up all the land? Sir John Lubbock had calculated that it would require £70,000,000 a-year to pay the interest. Mr. John Stuart Mill had said that the State could do as it liked with the land of the country short of absolutely taking it. He urged also that land had a certain specific value, and beyond that all belonged to the State. But why should the public at large have all the benefits of any improvements a farmer might make in his land? If it were so it would effectually put a stop to all future improvements in land. The present system of weights and measures, as applied to corn, was of a very peculiar nature; but there were people who, in endeavouring to improve it, wished to carry out what seemed to him to be a too radical system of alteration. It was true they had the imperial measure, but no one seemed to care much about using it. Everybody seemed to think that weight was the best, but why should we alter our system more than was necessary? Why were we to alter them simply with the view of adapting them to foreign people's weights and measures, with the cents and so on? If they did alter the present system, he thought the ton ought to be taken as the standard of their weights. But he felt sure they would never get any regularity in their weights and measures unless the onus were put upon the buyer instead of the seller. He regretted that there was not so much competition that year as usual. The entries for the best farms had not filled up at all. He thought the special circumstances would account for that. They had had a late harvest, and it had been difficult to get all the necessary work done within the usual time; and no man liked to show his farm without some prospect of his winning.

Mr. A. H. BROWN, M.P., agreed with Col. Corbett that the scheme put forward by Mr. Mill, and to which Col. Corbett had referred, was one that would not hold water, and it could never form the basis of a sound and practical measure of reform. He hoped, however, that that Club and farmers generally, would continue to agitate until the question was satisfactorily settled. The present system of local taxation had been the growth of many years, and was based more upon decisions in the law courts than by any particular Act of Parliament. They had the local burdens of the country put upon houses and land almost exclusively, whereas the imperial burdens of the country were paid by the excise and duties of that sort, and it was admitted that the system should be altered so as to bring the local burdens over a wider area of incidence. There had been some agitation on the question, and a committee of the House of Commons had sat, one in 1869 and one in 1870, and the Government had promised to take the whole subject into consideration. He believed the rating of woods and game would form part of the Government proposal, and there would be a mode laid down for assessing the value of railway stations. Such buildings as they were aware, had no fixed rent, and it was very difficult, therefore, for any Assessment Committee to rate them properly. The Government proposal was to find out the selling value and to make the property pay at the rate of 4 per cent. per annum, as rateable value. All this would draw into the rating net a large proportion of property that at present escaped from it.

The CHAIRMAN said he feared there was a tendency amongst farmers now to think more of speaking before the Central Chamber than of taking parliamentary action. The present month, he had often before observed, when the repeal of the malt-tax was more thought of than now, was the month to endeavour to influence Government by deputations rather than when the session had commenced, and ministerial measures were framed. But one deputation was going to wait on Mr. Gladstone with respect to preventive measures against cattle diseases. Mr. Keary, the report said, had read a paper to combat the view that scarcity of stock was owing to foreign disease. He expected this deputation would be met with official facts which seemed not to be generally known. What he believed was most desirable for the safety of their herds was to put the present restrictions with respect to the importation of foreign cattle in force against cattle imported from Ireland, but this the Irish members were sure to resist. He fancied it would be found that the cattle diseases now prevalent were not imported from abroad so much as was believed. It was stated that of 28,000 cattle imported last week only two were suffering from contagious diseases. At Harwich, where a greater number had been frequently disembarked weekly, only three animals had the foot-and-mouth disease since February. The question of quarantine was a difficult one, for pleuro-pneumonia was proved to be latent for twenty-eight days, so that the quarantine which would be too long for foot-and-mouth disease, which shows itself after six days, will not be long enough for pleuro-pneumonia. There was one point which the Club had often discussed, but one which he felt called upon to say a few words—the old question of the condition of the agricultural labourer. Severe remarks had lately been made by commissioners as to the state of the labourers in some parts of Shropshire, but not, he believed, on the labourers within the radius of the Wenlock Farmers' Club. Sweeping remarks were frequently made on landlords for not building more and better cottages. No one acknowledged the duty imposed on a landlord with respect to his cottages more than he; but he often wished to remind those who make sweeping assertions on the state of the cottages that these remarks tended to the abolition of the law of entail, the remedy advocated by one of the commissioners the other day in the *Times* newspaper. He felt the truth of the remarks made by Mr. Dent, M.P., in the present number of the *Royal Agricultural Society's Journal*, on the conduct of landlords, in an article on the labourer, from which he read an extract. (The effect of the extract was that all praise was due to great landlords for

the excellence to which many of them had brought their cottages; but not less was the merit of those, who having life interests only in land, were denying themselves pleasures to do the utmost they could afford in cottage building, as was done now by nine-tenths of those who had limited estates in land.) One of the commissioners, quoted by Mr. Dent, put the case of the landlords fairly, when he said they were now being called upon to repair the neglect of previous generations. The state of the labourer must be a matter of interest to all who newly came into estates, and one of them, the present Sir B. Leighton, had lately read a paper on the subject, in which the plan he was reported to have advocated was that of giving four acres of land to a labourer who had been thrifty, and had saved money. He would like to know their opinion, as practical men, on such a proposal. He believed they might approve of a quarter of an acre being thus allotted; but, putting aside the difficulty of getting four acres to allot, and the time of the labourer taken up in looking after his own land, he should like to know what labourers with families were likely to save money. He had been asked by the Government Commissioner to write his view of the state of the labourer, and of cottages, in South Shropshire, and he agreed to do it; but on reflection he thought it would be uninteresting to write an account of any one's property. (though his friend Colonel Corbett had done so), and he did not feel himself called on to criticise the estates of his neighbours. The commissioner had stated that farm wages in some parts of Shropshire were 8s. and 9s. He did not say in the district of the Wenlock Farmer's Club, which, he believed, was not visited when severe remarks were made on the state of things in Shropshire. Of course there were perquisites besides, but all interested in the labourer wished to know if it was necessary to pay part of the wages in beer, giving, he believed, an unlimited supply in some cases to make him work. Supposing only this sum, or the full value of his labour be paid in money, what room was there for thrift with a family to maintain out of as many shillings as the members of the family? He would just allude to the question of local taxation, which had been twice discussed in Shropshire, and was, it appeared, to be discussed a third time by their Chamber of Agriculture. The weakness of such discussions he felt lay in the arguments being all one-sided, the fact of land alone paying rates being uppermost in the minds of those who perhaps were interested in land only; but the difficulty of carrying the views generally expressed at such discussions he felt lay in great capitalists, whose fortune was both funded and in land, being indifferent as to which part of their income paid the taxes and which the rates. He would just say that he considered the great agricultural want in Shropshire was a good middle-class school for farmers' sons, such as had been raised in Suffolk, and now was being built by county subscription in Norfolk. He wished to be sure that small farmers' sons would be better educated than the labourers they would employ, and he for one objected to both being educated at the same school. Lastly, he would draw their attention to a proposal made in Gloucestershire and Worcestershire, that Shropshire should join with them and Herefordshire for an agricultural show, not of course to supersede flourishing local societies like those

at Ludlow and Wenlock, but to produce wider competition between four counties.

Mr. RODEN said: As to the question of the importation of foreign stock, he did not believe quarantine would remedy the evil. While the animals were kept penned up upon the water he believed that more disease would be generated. Stamping such diseases out he believed to be practically impossible. It was "the pestilence that walketh in the darkness," and he believed they were in the hands of that Providence Who alone could check the spread of such diseases, and Who alone could give them prosperity.

Mr. KEAREY had already expressed his opinion at meetings of that Club as to the prevalence of disease among stock, and he believed if the restrictions for moving cattle were more stringently put in force they would have less disease among stock than they had at the present moment. Although he did not for one moment mean to say that such diseases were not brought from abroad, he still held to the opinion he had expressed. He must strongly deny that the importation of those diseases was the sole cause of the disease that existed in this country. He recollected pleuro-pneumonia being rife long before cattle were imported free; and he believed that such diseases were epidemic, and epidemic alone. As Mr. Roden had said, he believed it to be quite impossible to prevent the outbreak of such diseases, but he did think that more care should be exercised by farmers who had the disease upon their farms in sending stock to market.

Mr. PREECE (Cressage) said it was all very well to fine farmers for moving the stock off their farms in such cases; but he had been fined for moving cattle from one part of his own farm to another, which, he thought, was rather too hard.

Mr. E. H. DAVIES thought that Mr. More had made a little mistake in what he said of the wages of farm labourers in Shropshire. So far as he knew the wages were 12s. or 16s. per week, and he did not think any were receiving so little as 8s. or 9s. per week. He (Mr. Davies) was always ready to do what he could for the Club; but having a farm of 700 acres to attend to he could not devote so much time to it as he should like.

Mr. MORE said that what he had stated was that he believed the average wages to be about 14s. per week, including perquisites, but that some actually received as little as 8s. or 9s., and he had been told by a man of great experience in South Shropshire that he remembered 7s. per week being paid, and no perquisites whatever. The commissioners had reported that 8s. or 9s. was paid; but he (Mr. More) was glad to find that it astonished members of that Club to hear of such things. If, however, they would read the report of the commissioners they would see that such was the case.

Mr. TREVOR said the chairman had alluded to a speech recently made by Sir Baldwin Leighton. Sir Baldwin recommended that every young man should keep a cow, but his (the speaker's) opinion differed from that. If there were to be cottages for men to keep cows they should be given to the labourers who had lived upon the estate for a number of years and who were getting past their work, and not to young men when they first came upon an estate.

MORAYSHIRE FARMERS' CLUB.

At the Quarterly Dinner, Mr. R. H. Harris, Earnhill, in the chair, and Mr. Ruxton, Inehbroom, Croupier,

The CHAIRMAN said the question for discussion on this occasion was—"On farms having a sufficiency of cottage accommodation for married servants, whether is it better to board the unmarried with them, or keep them in the bothy or kitchen?" That question presupposed a farm with accommodation for a certain number of married people upon it, but not sufficient for the whole of the servants. It also presupposed a proportion of the servants being unmarried, and the question was how should these be kept upon the farm? It was generally customary to have the opinion of the members of the Club in rotation, as they sat, and he therefore called on

Mr. CRICKSHANK (Melf), who said he had houses for his

men-servants, and he kept the boys in the kitchen. His experience led him to believe that they should be kept in the kitchen. He would keep as many married servants as he could, but he would keep the unmarried servants rather in the kitchen than in the bothy.

Mr. COOPER said that Spynie farm, though it had a pretty large and good staff of servants, necessitated the employment, from there not being cottage accommodation, of a number of single men, who lived in a bothy or out-kitchen, specially cared for and kept cleanly. He had no doubt whatever, if a sufficient number of cottages could be got, of the immense advantage they would be to the farmer, alike for comfort, convenience, and profit. He was quite satisfied of that. But still they could not have all the servants married men; and as to the

boarding of the unmarried with the married servants, he had no experience, nor any knowledge. That system had been largely adopted in the south, and his friend Mr. Walker (Leuchars) would be able to give the Club some valuable information regarding it.

Mr. REXTON (Inchbroom) said he had generally had four married servants in houses, and he had a bothy. It was impossible to accommodate them otherwise than in a bothy, not having a sufficient number of cottages. He was not sure that it would be desirable to have a cottage for every male servant on the farm; he would merely say that he was obliged to use the bothy. He never had any experience in the way of boarding the unmarried servants, and he did not know how it would work. On his farm in the county of Danf. he had about an equal number of servants, and he had tried the unmarried men in the bothy and in the farm-kitchen. He continued them in the bothy for ten years, and for the last six or eight years he had them in the kitchen. Both the bothy and kitchen suited very well. He never had the least difficulty, and he really could not say decidedly which was the best.

Mr. WALKER (Leuchars) said that, during his whole lifetime, since he commenced farming in Fife, he had about an equal number of married and unmarried servants. The system in that county was to have a bothy for the unmarried servants alongside of one of the farm-houses. The unmarried men got their $6\frac{1}{2}$ bolls of meal, and a pint of sweet milk from the cows. The wife in the house next to the bothy kept boiling water for them twice-a-day, and the unmarried men made their own supper. The bothy was cleaned out by the wife of the married servant, and everything kept in order. With regard to keeping young men in the farm-kitchen, they found in Fife that that would never do. It prohibited the landlady and her family getting into the kitchen at night. And another thing, it brought young men very much in contact with female servants. With regard to boarding young men with married men, that was out of the question altogether, for it was a well-known fact that, when a ploughman got a wife, he very soon had a sufficient family to fill his fireside, so that there was no room left for lodgers. If a bothy were kept, they could have it clean, and the men comfortable; and that was by far the best way that young men could be kept. He knew very well there was a want of accommodation in Morayshire for married men. It was different in the south; but, as he had said, where there were sufficient houses for married servants, they required all the room for their own families. He thought, if the bothy were well regulated, it was the proper place for single servants to be kept in.

Mr. BLACK (Elgin) said he had no experience at all, but it just occurred to him to say, lest it should not be noticed otherwise, that last year a Commissioner was in the county, making an inquiry on behalf of Government respecting the appointment of females and children in factories, and otherwise. That gentleman made very particular inquiries into the subject. He could not lay his hand upon his report before coming to this meeting, but so far as he could recollect, that report was very decidedly against the system of boarding young men with married servants.

Mr. HAY inquired whether the Commissioner gave any reason for his opinion.

Mr. BLACK said the Commissioner did, but he could not recollect the details of the report.

Mr. M'KESSACK (Kinloss) could not say he had much experience in the management of servants; but he had the half of the complement of servants in cottages, and the other half in the kitchen. There was a woman kept the kitchen clean for them, kept water boiling for them once or twice a day, and prepared potatoes, or whatever they had to get, for supper. The unmarried servants were on their bolls, and he found that system do very well.

Mr. HAY (Trochiehill) said he had no experience whatever of the bothy system. It seemed to him that it was a system that was passing away, and ought to do so. Nearly the whole of his servants had always been in the farm kitchen, except one or two of the principal, who were in houses. What he should like was to increase the house accommodation, to have more married servants, and, if possible, to have the young men boarding with them.

Mr. KAY (Forres) thought that this was a question that one might give an opinion upon, although not immediately engaged in dealing with it practically—the question bearing on the

best plan of accommodating unmarried servants. He thought the most objectionable plan of doing it was to board them in the houses of the married servants. There were very few instances, indeed, in which the farm cottages contained more accommodation than was absolutely necessary for the servant himself and his family. If the family were young, they required the most of the attention and care the mother could give them, without her having to attend to a boarder; while, if the family were grown up, they could receive no beneficial influence from a boarder. The boarding of unmarried servants in the farm kitchen was also very objectionable. Every one knew that their presence there completely excluded the wife and daughters of the farmer from the kitchen. Every one also knew the noise they created, and the kind of talk that went on amongst young men in a farm kitchen. These were his opinions, and they amounted to this—that the best place for an unmarried servant was a well kept bothy, where the men were kept comfortable, their sleeping apartment kept clean, the furnishings and dishes for their food properly cared for, and everything done for them that could be done. They would never be so happy and well pleased as in that position.

Mr. FERGUSON (East Grange) said he was very sorry that the accommodation for married servants on his farm was limited. He would like more houses, and though he did get more of them, he certainly would not approve of young men being boarded with the families of married men. He did not think there was sufficient accommodation in cottages for boarders. His unmarried men were in a bothy, with the exception of one or two in the house. With increased care in keeping the bothies clean, they would be exceedingly comfortable for the servants. The first desideratum was to get a good bothy. He thought it should be ventilated and go abroad that there are some places in the county of Elgin used as bothies that are not fit for human beings to be in. If they could give their married servants a little more and better accommodation, they would be far more comfortable in these bothies than elsewhere. The thing was to get a better bothy system. There were one or two proprietors he could point to who were now building bothies upon an improved system, giving every facility and accommodation to the men in the shape of good cooking apparatus, lavatories, &c., and he thought that should make the servants comfortable. As to living in the farm kitchen, that could not be approved of. It disturbed all their domestic arrangements in a way that is not at all desirable.

Mr. TOP (Ardivot) thought the result of this discussion would simply be to point out the great deficiency of accommodation both for married and unmarried servants that existed in Morayshire. He quite agreed with his friends Mr. Walker and Mr. Mackessack in their mode of keeping farm servants. He had had married and unmarried servants. The unmarried men he would have kept in a bothy. A great deal of the good or evil arising from the bothy system depended very much on the farmer himself. If the bothy was well managed, there need be no difficulty with it at all. He thought they would find very few cases where they would be able to make married servants take in lodgers.

Mr. WALKER (Alyre) said, so far as married servants were concerned, they knew very well, even though they had sufficient accommodation, what they could do with the allowance given them for fire and other purposes. They also knew what the men could afford for the furnishing of their cottages; and that if they had a man for a lodger, he must sit at the same fireside with the family, and entirely do away with the privacy of their home. There could not be anything more objectionable than to force a stranger into a family, whose presence would prevent them from knowing what family comforts are. It was also bad to have unmarried servants in the farm kitchen. However well-behaved and quiet the men may be, it debared the mistress of the house from entering the kitchen when they were there. They had heard often and often again very severe censure passed upon the bothy system, and he was sorry to say it was the exception to see a good bothy. It was impossible that all their servants could be married men, but their young men could not be better employed than living in a bothy, and seeing the different systems of different farms, and at the same time feathering their nests with the view of entering into a cottage. If they put the men into a bothy, they should give them facility for living comfortably and cooking their meat. For four or five years of a young man's career

bothy experience would not be the worst part of his life. He thought the bothy was the proper place where unmarried servants ought to be.

Major CULBARD said there could be no doubt it was a most disagreeable thing to have farm-servants in a kitchen. It must be a discomfort; and what was a discomfort to the farmer, must be a discomfort to the servant who had a family, and who wished to have all the privacy that his house could afford. He thought their friends the farmers ought to provide better bothy accommodation for unmarried servants. These seemed to be no earthly endeavour to make the young men comfortable, by giving them cooking arrangements, and such other things as would make their bothies fit places to live in. He had been in some of these bothies, and he was sure he had seen better dog kennels. He thought if proper accommodation were provided for unmarried men in the bothy, it would be the best way of providing for them. He did not think it was proper to burden married servants with unmarried servants as boarders, because they must feel it as much as the farmers,

who felt extreme discomfort in having them in the farm kitchen.

The CHAIRMAN said he agreed with the two or three gentlemen who had last expressed themselves. Where the farm had sufficient accommodation for married servants it was desirable to employ them; and that the young men should be kept in a bothy. He thought it was a most unfair invasion of the privacy of the domestic circle, which should be respected, whether it were high or low, to thrust any stranger into it. He knew that system existed to a large extent in the south. They were called bondagers there. It was known to be a system of unendurable bondage, and it had a bad effect upon the morals of the servants. How they could say to a married man, that he must take Tom, Dick, or Harry to board in his house, to be with him at his fireside, and to sit at his table at all times, he could not understand. He could not do that himself. It was his individual opinion that, where there were single men, they should be provided with a bothy. The preponderance of the opinion of the Club also appeared to be to the same effect.

THE TAUNTON AGRICULTURAL SOCIETY.

PRIZE LIST.

JUDGES.—STOCK: J. Stratton, Devizes; S. Nicholls, Bristol; J. Gannicott, Ilminster; and T. Potter, Thorverton. ROOTS: — Gibbs, Pitminster; S. Bond, Portland; and — Grabbham, Ilminster.

HORSES.

Thorough or half-bred colt, filly, or gelding, for riding or hunting purposes, four years old.—Prize, £4, J. Joyce, Allercott. Highly commended: R. P. Boyd, Wellington.

Cart gelding or filly, under three years old.—Prize, £4, W. R. Bond, Durston. Highly commended, W. S. Gibbs, Pitminster.

CATTLE.

BREEDING STOCK.

Bull above two years, pure bred, to be kept in the Western Division of Somerset to 1st June, 1872.—First prize, a silver cup, W. Farthing, Stowey Court, Bridgwater (Able); second, £5, W. Farthing.

Bull, pure bred, above ten months and not exceeding two years, to be used in the Western Division of Somerset to the 1st of June, 1872.—First prize, a silver cup, W. Farthing (Master Harry); second, £2, G. Gibbs's, Bishop's Lydeard. Commended: R. Farthing, Farringdon, North Petherton (Sir William).

Cow and offspring, cow above three years, and calf fallen since Nov. 1, 1870.—Prize, a silver cup, J. Davey (Temptress 2nd). Highly commended: G. Gibbs (Myrtle).

Cow above three years, in calf or with calf by her side.—First prize, £5, J. A. Smith, Bradford Peverell; second, J. A. Smith (Daisy). Commended: J. H. Webber, Ashill, Ilminster (Lydia); and J. H. Dunning, Creech St. Michael (Cherry).

Heifer, in calf or with calf by her side, not exceeding three years.—First prize, £5, T. H. Risdon, Washford (Alexandra); second, £2, G. Gibbs. Commended: J. Edwards, Haydon.

Heifer of pure breed, not exceeding two years.—First prize, £4, W. Farthing (Fair Rosamond); second, £2, W. Farthing (Princess Louise). Commended: G. Gibbs; and T. H. Risdon.

Bull above two years, pure bred, to be kept in the Western Division of Somerset to the 1st of June, 1872.—First prize, a silver cup, J. W. Paull, Ilminster; second, £5, J. W. Paull. Highly commended: J. S. Bult, Dodhill, Kingston.

Bull, pure bred, above ten months and not exceeding two years, to be kept in the Western Division of Somerset to the 1st of June, 1872.—First prize, a silver cup, W. H. Hewett, Norton Court (Crown Prince); second, £2, J. S. Bult. Highly commended: J. Edwards (Baron).

Cow and offspring, cow above three years, and calf fallen since 1st of Nov., 1870.—Prize, a piece of plate, J. S. Bult. Highly commended: W. H. Hewett (Miss Maria).

Cow, in calf or with calf by her side, not exceeding three years.—First prize, a piece of plate, W. H. Hewett (Vilot); second, £2, J. S. Bult.

Heifer, in calf or with calf by her side, not exceeding three years.—First prize, £5, W. H. Hewett (Annette 3rd); second, £2, W. H. Hewett (Nelly). Highly commended: W. S. Gibbs, Pitminster (Princess Royal).

Heifer of pure breed, not exceeding two years.—First prize, £4, W. H. Hewett; second, £2, W. H. Hewett.

FAT STOCK.

Ox or steer, above three years.—First prize, £8, R. Welsh, Ilminster; second, £4, W. Farthing.

Steer, under three years.—First prize, £8, J. S. Bult; second, £4, W. H. Hewett. Highly commended: R. Farthing, Farringdon, North Petherton.

Cow above four years, having produced a living calf.—First prize, £3, W. Farthing (Lofty); second, £4, M. Gibbs, Wellington.

Heifer under four years.—First prize, £3, W. Farthing; second, £4, T. H. Risdon, Washford.

SHEEP.

Pen of not more than four-tooth Longwooled breeding ewes.—Prize, £4, R. Farthing.

Pen of not more than four-tooth Shortwooled breeding ewes.—First prize, £4, A. Bond, Huntstile; second, £2, J. Culverwell, Claveshlays. Commended: J. H. Dunning, Creech St. Michael.

Pen of five fat wethers, not exceeding two years.—First prize, £4, H. Farthing; second, £2, T. H. Risdon.

PIGS.

Boar.—First prize, £3, W. H. Hewett; second, £2, T. Taylor, Pool Farm. Commended: T. Taylor.

Breeding sow.—First prize, £3, T. Taylor; second, £2, T. Taylor. Commended: T. H. Risdon.

ROOTS.

Two acres of Swedish turnips, grown in the county of Somerset, and within twenty miles of Taunton.—Prize, a silver cup, R. Davis, Milverton.

One acre of yellow mangold wurtzel, to be grown in the county of Somerset.—Prize, a silver cup, O. Hosegood, Ilminster.

One acre of red mangold wurtzel, to be grown in the county of Somerset.—Prize, a silver cup, F. Bond, White-lackington.

Two acres of common turnips, to be grown in the county of Somerset.—Prize, £5, F. Bond.

Two acres of Swedish turnips.—Prize, A. Bond.

Two acres of Swedish turnips, to be grown in the county of Somerset.—Prize, a silver cup, A. Bond.

THE ABERDEEN GAME CONFERENCE.

The Sub-Committee of the Aberdeen Game Conference have had a meeting to consider Sheriff Thomson's report on the tabulation of proprietors' and tenants' returns. The members present were: The Marquis of Huntly, Col. Innes of Learney, Col. Ross King of Tertowie, Mr. Edmond of Kingswells, Major Ross, Tillycorthie, Mr. M'Combie, M.P., Mr. Campbell, Blairton; Mr. Barclay, and Mr. Copland—Sheriff Thomson presiding. The following is the *interim* report submitted:

The tabulation of answers to queries having now been completed, and an abstract thereof prepared, Sheriff Thomson begs to lay before the joint-committee the following *interim* statement.

I. PROPRIETORS.—196 lists of queries were issued to proprietors; 102 have returned answers. The amount of rental (as per valuation roll) represented by the said 102 proprietors is £215,814; the total rental of land in the county is about £503,000. It will be remembered that no queries were issued to proprietors having less than £500 rental.

Q. I.—The covenants regarding game contained in the leases or general regulations of the estates of the proprietors who have made returns may be classified as follows: 1. General reservation of game to proprietor, with right to hunt and kill, 69; 2. do., and tenants bound to protect game and inform on poachers and trespassers, 12; 3. Game reserved to proprietor and tenant equally, 2; 4. No special covenant or condition regarding game, 16. Two proprietors returned their schedules blank, the land being in their own occupation. Two returned the queries unanswered, and one considers queries Nos. 1. and II. to be injudicious questions, but answers the other queries.

Q. II.—The practice which obtains apart from the regulations of the estates is returned as follows: On 41 estates the tenants are prohibited from killing game and rabbits; on 2 permission is granted to tenants, on application, to kill hares and rabbits on their farms; on 11 all tenants are allowed to kill rabbits; on 29 all tenants are allowed to kill hares and rabbits; on 1 permission is granted to tenants, on written application, to shoot winged game on their farms.

Q. III.—The number of proprietors who state that complaints of alleged injury by game have been made to them is 19; number who state that no complaints have been made, 80.

Q. IV.—The number of complaints where amount of damage was not stated is 20; the number of claims for damage, 3. Amounts of claims are not given. The claims are stated to have been settled by compromise.

Q. V.—The number of proprietors who state that they preserve game is 37; number who state that they do not preserve, 60. The crops adjoining preserves are stated to be protected by killing down in 36 cases; by fencing, in 3 cases; no arrangement for protection, 4 cases.

Q. VI.—On 30 estates the shooting over agricultural lands is returned as let; on 67 estates the shooting is not let; on 1 estate the shooting is stated to be "occasionally" let, and on another "partly" let. The only arrangement mentioned for the protection of agricultural tenants where the shooting is let is killing down the ground game, which is returned for three estates. On certain estates the game tenant is taken bound to prevent any such increase in game as shall injure the agricultural tenant.

2. TENANTS.—The number of lists of queries sent to tenant-farmers was 7,064; the number of answers received and tabulated is 4,578; the number returned blank, parties having removed or ceased to occupy land, &c., 54; the number from Dead Letter Office, 5; the number not returned, 1,427.

Q. I.—Total acreage of arable land possessed by tenants who have made returns, 372,085 acres. *Note.*—The whole arable acreage of the county is 573,554 acres.

Q. II.—Number of farms the game on which is let, 1,165; do. not let, 3,413.

Q. III.—Number of tenants who state that their crops are damaged by game or other wild animals, 3,816; number whose crops are not damaged, 762.

Q. IV.—Animals by which the crops are stated to be injured: Number who say that they are injured by hares, 680; by rabbits, 215; by hares and rabbits, 2,314; by deer and roes, 291; by grouse, 247; by pheasants, 171; by crows, wood-pigeons, or other vermin, 1,342.

Q. V.—The number of tenants who have estimated their annual loss is £2,257; and the total amount of the estimated annual loss is £19,906 14s. The number of tenants who state that they suffer loss, but give no estimate, is 1,549. The estimates vary in amount from a few shillings to £125 per annum.

Q. VI.—In 855 cases the animals are stated to come from adjoining estates; in 1,274 from the tenants' own proprietors' lands; and in 1,585 cases the answers are indefinite.

Q. VII.—The number of tenants who state that they have, within the last five years, complained to their landlord, or some one on his behalf, respecting game or other wild animals, is 846; number who have not complained, 3,239. The great majority of the complaints seem to have been verbal, and in numerous instances made to gamekeepers. In some cases complaints are stated to have been made to the lessees of the shootings.

Q. VIII.—Total amount of claims for damage, £683 12s.; number of tenants who have made claims, 41. Claims disposed as follows: By legal proceedings, 1; by compromise, 10; admitted and paid, 8; unsettled, 22—total, 41. There are one or two cases where the tenants state that claims were made; but the amounts are not stated. In a few other instances claims are said to have been made against lessees of the game, and the damage paid by them.

Q. IX.—Number of tenants who state that the absolute and unrestricted right to kill, either by their own hands or by others employed by them, hares and rabbits on the land they occupy, would enable them sufficiently to protect their interests, 3,106; number who stated that such right would be insufficient, 750; number who state it to be unnecessary, 134.

Numerous suggestions for further tabulation were made, and Lord Huntly proposed, and Mr. Edmond, of Kingswells, seconded, that the report should not be laid before the Conference until it had been ascertained how many of the tenants of the twenty-nine proprietors who say that they give leave to kill hares and rabbits, nevertheless complain that their crops are damaged by hares and rabbits, whether from their own or neighbouring estates. Mr. Barclay moved, and Colonel Innes, of Learney, seconded, that the report be at once submitted to a meeting of the Conference. On a division, five voted for Lord Huntly's motion, and four for Mr. Barclay's. Sheriff Thomson stated that the inquiry would involve a re-examination of the whole schedules, and would necessarily tend to considerable delay. The meeting expressed their sense of the ability and care with which the report had been drawn up. Sheriff Thomson, in returning thanks, said that much of the credit ought to be given to Mr. Fraser, the assessor, without whose assistance the work could not have been so satisfactorily done.

THE CENTRAL CHAMBER OF AGRICULTURE.

A meeting of the Council, consisting of the deputed members from provincial Chambers and of the elected members of the Council, was held on Wednesday in the Smithfield Show week, at the Salisbury Hotel, Sir M. Lopez, M.P., in the chair.

The minutes of the last meeting having been confirmed, and Mr. J. Abel Smith, M.P., having been elected a life member, The TREASURER read the financial statement for the present year, from which it appeared that the total amount of subscriptions received was £370 3s., to which was added a balance from 1870 of £131 3s. 11d., making a total of £501 6s. 11d., and that the disbursements amounted to £151 7s. 11d., leaving a balance in hand of £149 19s.

It was elicited in conversation that the arrears of subscriptions amounted to £169, being £10 in excess of the arrears at the commencement of the year.

The SECRETARY then read the recent correspondence with Mr. Gladstone, in which the Premier expressed his inability to receive a deputation from the Council in reference to cattle diseases during the week of the Smithfield Show, in consequence of his absence from London. The Secretary said that he had written to the gentlemen who were to have formed the deputation, asking them what alternative course they proposed to pursue, but as the answers in no way agreed, he had taken it upon himself to defer any action until the Council assembled.

Mr. HENEAGE moved, "That Mr. Gladstone be requested to receive a deputation from the Central and associated chambers on the afternoon of either the 5th or 6th of February." That would, he observed, probably be about the period of the meeting of Parliament, and he hoped the Council would in this case be more fortunate in their request.

Mr. CALDECOTT seconded the motion.

Mr. JASPER MOORE thought that the deputation should not be confined to cattle diseases, but should also lay before the Prime Minister the views of the Council in reference to the malt-tax and local taxation, and moved an amendment to that effect.

The amendment was seconded.

Mr. BIDDELL deprecated the mixing up of the cattle question with the others as tending to prevent the interview from proving of any value.

Mr. NEILD, Sir G. Jenkinson, and the Chairman expressed their concurrence in this view, and ultimately the amendment was withdrawn; after which the original motion was adopted unanimously.

Mr. J. K. FOWLER expressed his confidence that the Home Cattle Defence Association would cordially unite with the Council in demanding from the Government adequate protection against contagious diseases.

The Report of the Local Taxation Committee was then presented. It was as follows:

Since the last meeting of the Central Council, the Local Taxation Committee have distributed between two and three thousand copies of the Report they then presented. They trust that a perusal of that record of their proceedings during the past session will insure a still larger amount of support to their exertions in the future. Your Committee are gratified to be able to point to several instances in which the urban ratepayers are awakening to their common interest in the removal of the present unjust incidence of Local Taxation. They would especially refer to two large meetings recently held in London, at which their secretary was present. One of these was held at the Cannon-street Hotel, under the presidency of Alderman Lusk, M.P., when the representatives of twenty-one metropolitan parishes were present. This meeting unanimously resolved to support the principles of the Metropolitan Poor Rate League, a body whose objects are very closely allied to those of your Committee, their aims being defined to be the removal of imperial charges from local taxation; the extension of the present area of assessment to property now exempt; and the maintenance of local control over funds raised locally and expended for local objects. The second meeting was held at the Agricultural Hall, Islington, and was presided over by Lord George Hamilton, M.P. Upwards of 1,500 persons attended, and received en-

thusiastically the addresses of the noble chairman, of Mr. McCullagh Torrens, M.P., Captain Warner Dennis, and other gentlemen. A petition to Parliament was unanimously agreed to, praying for a redress of the grievances inflicted on the ratepayers by the present incidence of Local Taxation, and referring specially to the limited area of property on which local rates fall, and the absence of any local control whatever over large portions of the funds now provided by these rates. It is worthy of remark that the various speakers recognised the necessity of the metropolitan ratepayers combining with those in other parts of the country who were now pressing for redress. Mr. Torrens, M.P., especially cautioned the meeting against the too probable attempt of the Government to create a fictitious division of interest between town and country in this matter, and warned them to accept no piecemeal legislation; and he clearly pointed out that if they permitted their opposition to be disarmed, by the omission of the metropolis from the measure brought forward, they would find that the same completely delusive remedies proposed for the rest of the country would be applied to themselves in a subsequent session. In their last Report, your committee undertook to consider very carefully the bill introduced by Sir Charles Adderley last session, which embodied the recommendations of the Sanatory Commission. This they have done the more readily as they have good reason to believe that the Government intend themselves to deal with the consolidation of the laws relating to public health, water supply, and local government. In examining, therefore, the bill before them, your Committee finds that its objects are as follows: 1. To consolidate all existing statutes on sanitary matters. 2. To make all existing provisions and regulations by means of the central authority in all rural as well as urban districts compulsory, whereas they are at present optional and permissive. 3. To enforce certain new recommendations of the Sanatory Commissioners. In introducing this bill, Sir C. Adderley stated "that it contained economy in every one of its provisions," that there was in it "nothing that could increase the expenditure of the country," and that "no new authority and no new officers were created by the bill." With this your Committee regret they cannot agree, and for this reason: Now it is optional with any district whether or not it shall tax itself for these sanitary purposes, while this bill proposes to render it compulsory on all districts to provide the requisite machinery and officials, and to carry out new regulations at the bidding and to the satisfaction of a central authority. Any such measure must necessarily entail increased local rates. Sir Charles Adderley's bill proposes, therefore, new, because compulsory, charges: 1. For objects which will entail expensive machinery and many paid officials. In only a few cases, perhaps, will the expense of electing new boards be incurred; for existing town councils and local boards are made the local authority in urban and existing boards of guardians in rural districts; but in every case the following new officers must be paid out of the rates—a clerk, a treasurer, a surveyor, one or more local inspectors, one or more collectors, one or more medical officers; while none of these can be removed by the local authority, except the clerk, treasurer, and collectors, without the consent of the central authority; and while in the case of the medical officer this consent of the central authority is required not only to his removal, but also to his appointment and to the amount of his salary. II. Further, this bill entails new, because compulsory, charges for the carrying out of: (1) Sanatory regulations such as—the protection of water-courses from sewage pollution (clause 14); the scavenging the surface of streams (clause 147); the management of sewers (clauses 153-154); the regulation of privies, cesspools, drains, ditches, &c. (Cl. 150, &c.); the abatement of nuisances (Cl. 192); the regulation of common lodging houses (Cl. 236); the provision of means of disinfection, of the carriage of infected persons, and the erection of mortuaries (Cl. 286-309). And (2) New Expenses in regard to Water Supply; in the cleansing of Wells (Cl. 115); in the submitting of all plans of new waterworks to the Central Authority (Cl. 121); in the inspection of works in progress, and of all existing reservoirs by the Central Authority (Cl. 124-125); in having all water supplied by them filtered to the satisfaction of the Central Authority (Cl. 134); in remunerating analysis appointed by the Central Authority, wherever the Local Authority supplies water (Cl. 135). Besides these points on which additional expense must arise, your Committee must point to the general tendency of this Bill to increase centralisation. This may be specially observed: (1) In the control reserved to the Central Authority over the removal and even over the

appointment and salary of Local Officers. (2) In the powers of the Central Authority in defining and acting upon a "default" of the Local Authority as in clauses 89-99—a wide door being thus opened for the expenditure of local funds, under the sole control of the Central Authority. (3) In the powers given to the Central Authority to employ the Police as its agents in certain cases (Cl. 100). (4) In the extent of the control reserved to the Central Authority over the Water Supply—reducing in many instances the Local Authority to the mere officer of the Central Power. (5) And lastly in new powers with regard to making of Bye-laws vested in the Central Authority. Also it must be observed that unless a very careful and discriminating use be made of the powers contained in such a Bill, for the subdivision of districts into "*parishes and parts of parishes*," a still further grievance will arise. For various sanitary works are of benefit only to individual properties or to very limited special areas, and it would be unjust in the extreme to levy a common charge for such purposes over areas unaffected by such improvements, or which had already provided them at their own charges. The necessity of a reform and simplification of the laws now existing on all matters connected with the Public Health is admitted by all; but the objections of your Committee to any such legislation as that proposed are mainly these: First, that every such measure as this must materially increase the amount now unfairly levied by rates upon one class and on one description of property only, and that until a thorough revision and readjustment of the present incidence of local taxation takes place, it would not be just or politic to increase these exceptional charges for any purpose or object whatsoever. Second, that such a measure tends to promote increased centralisation, and to supersede the power and discretion of the Local Authority; that all such legislation should be strenuously resisted, and advantage taken of any consolidating measure to obtain such a revision of the relations between Local and Central Authorities, as will perpetuate a sound, vigorous, and healthy system of Local Self Government. Your Committee would also desire to direct attention to the proposals of the Endowed School Commissioners. The removal or diversion of many small endowments throughout the country from the purposes of Elementary Education, would cause a considerable increase, in many instances, of the Rates required for this object, and a further injustice to ratepayers would be inflicted by the augmentation of a charge which is purely national in its character. In conclusion, your Committee would again urge their supporters in the country to lose no opportunity of impressing on their Parliamentary Representatives the paramount claims of the whole system of Local Taxation for a comprehensive revision. They trust that they will manifest their own interest in the question by promoting discussions in every district, by influencing as far as possible the local press in their own localities, by affording increased pecuniary assistance to the efforts of the Committee, and by inducing others who have not yet hitherto contributed to aid a movement the sole object of which is to make every man pay according to his ability to those national purposes from which every man in proportion to his means derives equivalent benefit and corresponding advantages. Your Committee have to acknowledge with many thanks contributions to their funds, received since their last Report.

MASSEY LOPES,
Chairman.

THE CHAIRMAN said before any one moved the adoption of that report he wished to make one or two remarks. A short time ago the local taxation committee promised to analyse Sir Charles Adderley's Bill relating to sanitary matters. They had now performed that duty, and they had found one great and essential difference between that Bill and the report of the Royal Sanitary Commission. In the latter there was a recommendation which seemed to have escaped the observation of Sir Charles; but he hoped it would not escape the observation of the Government when they were considering what measure they should introduce into Parliament. He would read to the meeting that portion of the report of the commission which related especially to the question of the payment of the expenses incurred. The commissioners said: "It is impossible to turn from this division of our subject without one word as to the exclusive incidence of this in common with all other branches of local taxation on real property in entire relief of personalty, and as to the exemption of the property of the Crown from such taxation. With reference to the former of these two points it is admitted that having regard to some of the principal purposes for which a general district rate has been and hereafter will be imposed, its incidence on real property is peculiarly fitting; but as regards others of these purposes it may be fairly questioned whether the expense of benefits so general, should be borne by the taxation exclusively of real property. In dealing with a limited portion of a large

general subject, it does not become us to do more than glance at either of these anomalies, or to suggest with reference to rating for sanitary objects any departure from that which, in the wisdom of Parliament, may be the general law in respect of cognate subjects; but it cannot be otherwise than pertinent to remark that instances are not wanting in which local expenditure and taxation have been largely relieved by grants from the Imperial Exchequer; and thus, though roughly and imperfectly, the public funds arising from other sources than real property have been brought to contribute in aid of burdens in other respects locally imposed on real property alone. There are, for example, State contributions towards certain expenses in connexion with the relief of the poor; for instance, the salaries of the auditors and the poor-house school teachers, and one-half the salaries of the medical officers are paid by the Imperial Treasury, which also contributes largely to the expense of prosecutions and of county and borough police. Large amounts are annually voted from the Consolidated Fund for school buildings and educational purposes—on this principle, that matters of so general concern cannot be left to unaided local efforts, and that as the result of local neglect would be a national mischief, so the prevention of such a result is matter for national interference, and to be purchased in part at the national expense. To the extent at least which these precedents indicate, and until this whole subject may be capable of exhaustive treatment, and the undue incidence of local taxation on real property may be remedied, it seems desirable that the State should aid the local interests in securing efficient sanitary administration. This is a matter of imperial importance, and is also in its turn too likely to be overlooked and neglected if left entirely to local effort, and too likely also when neglected to cause national, and not merely local mischief. In any degree, therefore, in which an amended health law may lead to greater expenditure by an improved system of inspection, by imposing greater medical supervision, and securing further medical aid, by improved registration, and by any other measure not purely or necessarily local in its original effect, it seems expedient and just that the localities should receive assistance from the State." In conclusion the Chairman expressed his hope that Parliament would adopt the principles thus enunciated by the commission.

On the motion of Sir G. Jenkinson the report of the Local Taxation Committee was adopted.

The CHAIRMAN said the next business on the agenda paper was the appointment of a treasurer and a paid secretary for the year 1872; but as a new code of laws was to be proposed, involving those appointments, he had to suggest that the present treasurer and secretary should be requested to act in those capacities until the meeting in February, and this suggestion was adopted.

The SECRETARY then read the annual report of the council.

The following is the Report—that is, merely omitting the advertisements, or puffs more or less direct for certain people or certain properties:

The Central Chamber of Agriculture, as originally projected, was designed to be, not so much a large society in itself, as a nucleus around which might be organized an association of independent Chambers for counties and for districts. This intention has been realized. At the termination of the sixth year of its existence the Central Chamber numbers 196 subscribers, of whom sixteen are life members; but it embraces in association by means of its representative Council ninety-nine Chambers and branch Chambers, having a total constituency of over 18,000 members. Since the last annual meeting the Faringdon Chamber has been dissolved, and the Midland Farmers' Club has withdrawn from association. Five Chambers, however—namely, the West Gloucestershire, and the Knoyle and South Wilts, which have been formed during the year, and the Malton, Ripon, and York Chambers, which were branches of the North Riding Chambers, have united themselves by subscription to the Central Council; while other Chambers have been established or in process of formation. But the most prominent activity has been displayed in the institution of branch Chambers, it having been found impossible in any other way to provide the whole body of members of any large county Chamber with opportunities for the expression of opinion. The most favoured system of organization consists of branches transferring part of their members' subscriptions to the county Chamber, holding meetings immediately in advance of the county meeting, and upon the same subjects, and then appealing by repre-

representatives at the general meeting convened in the county town or other head-quarters of the Chamber. By this and similar arrangements, the principle laid down in a former report is being carried out—namely, that as few of the farmers distributed over a large province can attend at the head-quarters of their society, the society must go to the farmers, or, in other words, it must provide centres near at hand where questions can be discussed and from whence decisions can be forwarded to the collective meetings of the county or district. Thirty-six of such branch Chambers were named in last year's report; this number has now been increased to forty-three. The Devonshire Chamber has four branches or Farmers' Clubs corresponding with it—namely, at Barnstaple, Bideford, Colyton, and Honiton; the Lincolnshire Chamber has organized four branches—at Boston, Brigg, Grantham, and Louth; the Norfolk Chamber is now strengthened by the West Norfolk Chamber at King's Lynn; the North of England Chamber receives representatives from thirteen union districts of Northumberland and parts of the adjacent counties; the Shropshire Chamber is now supported by nine branches—namely, at Ellesmere, Ludlow, Market Drayton, Much Wenlock, Newport, Oswestry, Shifnal, Wellington, and Wem; the Staffordshire Chamber has five branches or district meeting-places—namely, Burton-on-Trent and Tamworth, Lichfield, Newcastle, Uttoxeter, and Wolverhampton; the Warwickshire Chamber is supported by two flourishing branches—at Henley-in-Arden and Shipton-on-Stour; and the North Riding of Yorkshire Chamber has five branches—namely, Maltby, Pickering, Ryedale, Scarborough, and Whitby. The Council call upon agriculturists in Bedfordshire, Buckinghamshire, Derbyshire, Huntingdonshire, Lancashire, Oxfordshire, Rutland, Sussex, and a majority of the counties in the principality, in which no Chambers have yet been organized, to consider whether they cannot aid in extending this great movement of combination of the agricultural classes for the promotion and defence of their mutual interests. The present rate of annual contribution from the associated Chambers to the funds of the Central Council amounts to £286, and the contribution from subscription members of the Central Chamber, considering that five life-compositions have been received in 1871, to £230; making the total present rate of income of the Council £516. But, as appears from the financial statement appended to this report, the arrears are very heavy, in spite of the repeated applications made by the Secretary for payment.

In order that the numerous Chambers of Agriculture may exert their full power upon public opinion, and may have due weight assigned to their wishes and decisions by the Legislature and by the Government, it is essential to secure, as far as possible, united and simultaneous action upon all questions brought before them; and this object can be attained only through a central representative body, assembling for mutual counsel and direction, concerting measures in accordance with the views of the Chambers, and concentrating in resolutions and appeals, made to Parliament or to public opinion, the voice of the great majority of the agriculturists who are members of those Chambers. Accordingly, the Council, having received various resolutions on the subject in October, 1870, appointed a committee in December to consider and suggest what changes should be made in the rules; and at the meeting on April 4 in the present year this committee reported in favour of admitting deputed members of provincial Chambers to be members of the Central Chamber, and thus to have a voice in the framing or alteration of rules, in favour of regulating the voting power of each Chamber in proportion to the number of its members and its money contribution to the Central Council, and in favour of allowing to such deputed members a plurality of votes in order that the larger or more remote Chambers may be able to exercise their due influence in the decisions of the Council. In fact, the Committee, with no little labour, prepared an altogether new code of laws which were submitted to all the Chambers; and, after discussion on May 3rd, and again on November 7th, the new Constitution and Laws of Association, with sundry amendments, were adopted by the Council and recommended to be passed at the annual meeting this day. The Council would add their recommendation that the new bye-laws should provide for the holding of Council meetings, as heretofore, on the first Tuesdays in February, March, April, May, June, and November, and on Wednesday in the week of the Smithfield Club Show; and that, in addition to the General Business Committee, there should be appointed a limited Parliamentary Committee.

The Council regard with unmixed satisfaction the successful working of the Local Taxation Committee, which was appointed by the Council in May, 1869, and has reported its proceedings month by month since that date. Under the chairmanship of Sir Massey Lopes, Bart., M.P., with a secretary, and Executive Committee, an office, and a special fund of its own, this Committee has obtained the personal support of eighty-three members of the Legislature, who are now numbered in its ranks; and the efforts which have never been intermitted throughout the year, in the agitation of Local Taxation Reform by petitions to Parliament, by public meetings, the dissemination of printed matter, correspondence

with the courts of quarter sessions, and by other agencies, are recapitulated in the separately-issued report of the Committee, to which the Council would earnestly direct the attention of members. In March the Central Council considered "The present unjust incidence of local taxation, and what further action shall be taken to obtain an entire revision of the same," and passed resolutions declaring that no measure will be regarded as just and satisfactory which continues the exemption of other than real property from contributing to new and national burdens, protesting against the militia barracks and storehouses' clauses of the Army Regulation Bill, and against the payment of election expenses out of county or borough rates, and passing a vote of thanks to Sir Massey Lopes and the 194 members of the House of Commons who supported his motion on local taxation. At an adjourned meeting held on April 20th, the Council, in receiving a report of the Local Taxation Committee upon Mr. Goschen's Local Taxation Bills, accorded a vote of thanks to the Committee, and called upon all provincial Chambers to urge their parliamentary representatives to support the points which had been brought forward in that report; and the Council resolved, in particular—(1) That the Government bills continued the exemption of income arising from personal wealth from contributing to the relief of the poor and other local charges; (2) that the proposed division of rates between landlord and tenant did nothing to relieve owners and occupiers of houses and land of the burdens they complained of; and (3) that the powers to be conferred on the new Government Board would still further restrict local self-government, and increase centralisation and local expenditure. On May 2nd, the Council, after again discussing the "Rating and House Tax," and "Rating and Local Government" Bills, resolved to attach the same effect, and in condemnation of the bills, though admitting that some of the administrative clauses were worthy of consideration, and further called upon members of Parliament and others representing owners and occupiers of real property to take all legitimate means for opposing the Government measure. On June 6th the Council passed a resolution accepting the withdrawal of the Government bills, as an acknowledgement of their failure to meet the requirements of ratepayers, but regretting that the Government had found it impossible to fulfil the promises held forth in the Queen's Speech. The Council also resolved firmly to oppose the clauses in the following bills, which threatened greater burdens on the rates—namely: The Army Regulation Bill, the Elections (Parliamentary and Municipal) Bill, the Further Abolition of Turnpike Tolls Bill, the Pauper Lunatic Discharge and Regulation Bill, the Prison Ministers Bill, the Registration of Voters Bill, and the Corrupt Practices Amendment Bill. The Council record with gratification that the Government Local Taxation Bills were withdrawn, the militia barracks and storehouses clauses were defeated, clause 18 in the Elections Bill was defeated, and clauses 19, 20, and 21 were withdrawn, the Prisons Ministers Bill was withdrawn, and the Registration of Voters Bill (No. 1) and Registration of Voters Bill (No. 2) were both withdrawn. The Committee appointed on November 8th last year to confer with the various Fire Insurance Offices as to the most equitable mode of insuring farming stock reported on February 7th that it had communicated with sixty-two offices in Great Britain; it enumerated the offices which were found to adopt the terms with the "average clause" as agreed upon by the companies associated under the "Tariff," and named six offices which communicated other terms, and in particular the Essex and Suffolk Equitable Insurance Society and the Lynn Town and County Insurance Company, which accept insurances of farm stock without the average clause. The Committee held a conference with representatives of the associated offices, and also with representatives of non-associated offices. The Committee did not object to the average clause being applied to three-fourths of the value of agricultural produce, provided average prices and average crops over a series of years were taken as the basis of the amount on which premium is to be paid. It reported its regret that the representatives of the associated offices unanimously declined to entertain this proposition, which determination renders necessary for the farmer's full protection that he shall take out a new policy year by year, and may also necessitate an additional premium in case of a sudden rise in the value of grain. The Committee were happy to find that other offices are willing to accept insurances upon the terms which it suggested; it recommended farmers in all cases to insure hay, corn, straw, and similar agricultural produce in a separate amount from other property; and urged that it should be the practice of all (as it already is of some) offices to inquire into and decide upon the sufficiency of the amount insured at the time of insuring. The report was adopted, printed, and circulated. The report of the Joint Committee of the Central Council and the International Decimal Association was referred to the Provincial Chambers on October 4th last year, with a request that they would consider and resolve upon it prior to the Council meeting of February, 1871. And at this meeting it was resolved, as on a former occasion, that all agricultural produce except liquids should be sold by weight only, and

that the Council, appreciating the advantages of the recommendations contained in the Report of the Joint Committee (in favour of the "quintal" of 100 kilogrammes, and the compulsory use of the metric weights after a defined period), was of opinion that it is desirable in the first place to introduce instruction in the metric system in public elementary schools. At the February meeting the Council unanimously resolved to urge the Government, when reviewing the general licensing system of the country, to consider the unjust pressure of the Malt Tax upon the growers of barley and upon the labouring classes who are the great consumers of beer. Copies of the resolution were forwarded to the Home Secretary and to the Chancellor of the Exchequer. On May 3rd the Council unanimously resolved that efforts made to secure better and cheaper beer by a modification of the Malt Tax would be impeded by those provisions of the Government Licensing Bill which are designed to create a monopoly adverse to the interests of that large class for whom beer is a necessary beverage. And it was further resolved that the costs to be incurred in administering the Bill ought not to be defrayed from the local rates, but that they may be fairly made a first charge upon the revenue derived from licenses. The Government Bill was ultimately withdrawn. At the February meeting the Council resolved that legal provision is necessary, and ought to be made, for enabling persons interested in occupation roads not being highways to co-operate for the purpose of making, improving, and maintaining such roads at their own charge, and that the subject is of sufficient importance to justify an application to the Government to initiate legislation thereupon in the next Session of Parliament. On March 7th the Council passed a resolution to the effect that, as good roads cheapen commodities, benefit all classes, and secure to the public rights of user practically unlimited, highways should not continue to be a charge on real property only through the poor-rate assessment. On April 14th the Council declared its opinion that the powers conferred upon the surveyors in assessing the property and income tax under Schedules A and B, and also the house duty, are generally exercised in an arbitrary and unjust manner; that those powers give the surveyors of taxes inducements and facilities for making most excessive surcharges for which there are no reasonable grounds, thereby causing annoyance and inconvenience in obliging persons to appeal against such assessments; that the present mode of assessing is very unfair to many parties who make a true and just return, and that, in cases where parties are charged in excess, the expense of appealing should be borne by the person making the charge. On April 15th the Council resolved that none of the bills then before Parliament was sufficient for the purpose of curing the evil of the over-preservation of ground game, but that an Act embodying the principles of the third clause of Mr. McLagan's Bill and the fourth clause of Mr. Lock's Bill, with some modification of the law of trespass, would be satisfactory. And at the June meeting the Secretary was instructed to call the attention of all the Chambers to Sir H. J. Selwin Ibbetson's Bill. On June 6th, after hearing a most able paper read by Dr. J. Rogers, President of the Poor-Law Medical Officers' Association, the Council resolved that the present system of Poor-Law Medical relief is inadequate to the wants of the poorer classes, is unsatisfactory in results, and requires amendment, and that it is expedient to adopt for England and Wales a dispensary system, with a modification of the provisions of the Irish Medical Charities Act. A copy of the resolution was forwarded to the President of the Poor-Law Board. On May 3rd the Council instructed the Secretary to urge all the Associated Chambers to press for the rescinding of the Privy Council Order of April 20th, which permitted cattle from Holland to pass inland to any part of this kingdom after only twelve hours' detention at the place of landing. On various occasions during the year the Secretary addressed letters to the *Times* and other journals, calling public attention to cases of the importation of contagious disease. At the meeting on November 7th, the Council unanimously resolved that the failure of the Contagious Diseases (Amended) Act has demonstrated the necessity for compulsory slaughter or fourteen days' quarantine of all imported foreign animals, as uniformly demanded by the Council; that the Government should make as complete and effectual as possible their present inspection of all cattle and sheep previous to embarkation in Ireland, and of all vessels engaged in conveying animals between Ireland and Great Britain; that Government officers should be appointed to enforce the provisions of the Act with reference to the cleansing and disinfecting of railway trucks, yards, and pens, and the watering and transit of animals on railways in Great Britain and in Ireland; and that, when these objects have been secured, the cattle *cordons* should be removed from the metropolitan district. Copies of these resolutions were forwarded to Mr. Gladstone and to Mr. Forster, and Mr. Gladstone was requested to receive a joint deputation of the Chambers of Agriculture and the Home Field Defence Association during the week of the Smithfield Club Cattle Show. The Council regret that absence from London has prevented Mr. Gladstone being able to accede to this request; and it remains for the meeting this day to determine

what alternative course shall be adopted. The Council congratulated the Chambers upon the increasing interest which has been manifest in the meetings during the year; and in particular they would note the dinner at the City Terminus Hotel, on May 2nd.

On the motion of Mr. D. Long, seconded by Mr. Willson, this report was received and approved.

Mr. GENGE ANDREWS presented the resolutions of the Somersetshire Chamber relating to cattle traffic and to local taxation, as follows:

That the continued importation of cattle disease of foreign origin during 30 years has produced a state of things amongst keepers of cattle which materially interferes with and checks production. That the most stringent, costly, and careful inspection which is practicable has, and must necessarily continue, to fail in discovering latent disease in imported cattle. That the importer, the butcher, and the consumer, and the sanitary state of towns, will benefit by the slaughter of all foreign fat animals in completely enclosed spaces at the ports of debarkation. That this Chamber will use its influence to secure legal and permanent provision for the sale and slaughter of all foreign fat animals within enclosed markets, and the quarantine of lean stock at every port licensed for their admission into Great Britain.

That this Council, in continuing its opposition to the unjust exemption from the poor-rate assessment of income arising from personal property, views with satisfaction the fact that it is already evident that the ratepayers of towns, especially of the metropolises, are beginning to see the monstrous injustice of charging the larger half of a direct tax of £16,000,000 on house property. That committees in connection with the County Association of Ratepayers should be formed in every town, with power to add to their number, and three to be a quorum. That the Honorary Secretary be requested to present these resolutions to the annual meeting of the Central Chamber.

He moved that the cattle disease regulations and local taxation be the subjects discussed at the meeting of the Chamber in February.

Mr. D. LONG seconded the proposal.

Mr. NEILD opposed it on the ground that the local chambers were looking anxiously to the malt-tax being dealt with as the next subject of consideration. He moved, therefore, that the malt-tax be included as the prominent question for discussion in February.

Mr. T. WILLSON seconded the amendment, and said that unless the Chamber took the "bull by the horns" in reference to the malt-tax, it would lose most of the members of the Eastern associations.

Mr. STORER said he was in favour of bringing the cattle traffic regulations before the Legislature as soon as possible. He concurred, therefore, in the motion of Mr. Andrews.

Mr. HENAGE reminded the Chamber that the question of local taxation had been completely thrashed out, and that what they had now to do was simply to let the Government understand that that question, in the opinion of the Chamber, stood in the foremost rank, and that they did not mean to put it on one side merely because ministers had made an attempt to deal with it and failed. Moreover, as stated in the report of the committee, the towns were beginning to move in the matter, and encouraged the hope that the Chamber would receive valuable aid from that quarter. As, then, local taxation had been fully discussed already, and little more was to be said respecting it, the real subject for discussion in February would be the Contagious Diseases (Animals) Act, which stood next in order.

Mr. BIDELETT said that his county (Suffolk) was deeply interested in the malt tax, and was looking for more rigorous and decided action by the Chamber with regard to it. He did not object to the proposal to take Local Taxation and the Contagious Diseases (Animals) Act, as proposed by Mr. Andrews, but he strongly protested against placing the malt tax last, when there would be no time to consider it.

The CHAIRMAN: Then let it be understood that the malt tax will be discussed at the meeting in March.

Mr. FOWERADMITTED that the malt tax was a question of primary importance, but at that moment there were not less than 4,000 sheep at the river side affected with a serious disease, and he hoped it would not be thought that farmers were content to let the cattle-traffic question slumber until February, without taking it then in hand. Let that be the subject for discussion along with the malt tax, both of which would have

to be debated at the very beginning of the session of Parliament. Local taxation might certainly rest until March.

After some further conversation it was arranged that the questions to be set down for February should be, 1. Local taxation; 2. Contagious diseases of animals; 3. The Malt-tax.

The Annual General Meeting of the members of the Chamber then took place, and the Report of the Council was received in order to be circulated.

On the motion of Mr. PELL, M.P., seconded by Mr. D. LONG, Sir M. Hicks Beach, M.P., was unanimously appointed Vice-President for the year 1872, and President for the year 1873.

Sir M. H. BEACH, in accepting the office, said until a few days ago his honour had been totally unexpected by him, and he felt it the more because, owing to the pressure of other engagements, he had been precluded from being anything like a regular attendant at the meetings of the Chamber, though he remembered that he attended them when the society was in its infancy. During his term of office he would do his best to maintain the Chamber's prosperity and influence.

The following were elected members of Council: Sir M. Lopes, M.P., Mariston, Roberough, Devon; Mr. C. Clay, Walton, Wakefield; Mr. T. Duckham, Baysham Court, Ross, Herefordshire; Mr. G. Storer, Thorston Hall, Newark, Nottinghamshire; Sir George S. Jenkinson, Bart., M.P., Eastwood Park, Falfield, Gloucestershire; Mr. H. Neild, The Grange, Worsley, Manchester; Mr. G. Whitaker, Caldwell, Kempsey, Worcester; Rev. E. Smythies, M.A., Hathern Rectory, Loughborough, Leicestershire. These were re-elections of retiring members, with the exception of

Sir M. Lopes and Mr. Storer, who take the places of Mr. W. Gardner, Canterbury, and Mr. J. Ichmsley, Newark.

On the motion of Mr. MUNTZ, seconded by Mr. T. DUCKHAM, it was unanimously resolved that the laws and constitution recommended by the Council be approved and adopted, and come into operation on the 7th of February next, and that the first general meeting of the Chamber under the new constitution be held on that day. It was further agreed that Mr. Muntz, Mr. Clay, Mr. G. Whitaker, Mr. Jones, Mr. Little, and Capt. Craigie be a committee to prepare bye-laws and arrange the details under the new constitution.

Mr. MUNTZ proposed a vote of thanks to the Chairman, Sir M. Lopes, for his services during the past year, which was seconded by Mr. Horley, and carried by acclamation.

Sir M. LOPES could only say in vacating the presidency of the Chamber that he had to thank all and every member for the uniform kindness and courtesy they had shown him on every and all occasions. Their deliberations had been conducted with a degree of order and decorum which might vie with those of the highest assembly in the land. Their discussions had been characterized by a vast deal of ability and great moderation of language and temper, and he was pleased and proud at having had the honour of presiding over the Chamber during the past year. He was glad to find, moreover, that the gentleman who was to succeed him was one more competent than himself for the office, and who he felt sure would maintain its dignity and importance as effectually as any one of his predecessors. In retiring from the chair he assured them that his interest in their questions would in no respect be diminished. He trusted they would continue a great and growing power, prosperous and flourishing, and daily proving that they were a bulwark and mainstay of the agricultural interest of the country.

The proceedings then terminated.

FRENCH PEASANT FARMERS' SEED FUND.

The last general meeting of this Fund was held on Wednesday, December 6, at the Salisbury Hotel, when the final Report relating to the Distribution of the Fund was presented. The attendance was small, it being no doubt understood that the proceedings would be rather of an executive and winding-up than of a deliberative character. Lord Vernon presided.

Mr. BRANDRETH GIBBS, one of the hon. secretaries, read the following report of the Committee:

The last Report of the Executive was presented to the General Committee and the Subscribers on the 23rd of May, after the close of the distribution of spring corn. At that date there remained in the hands of the Committee a balance of £2,098 Hrs. 7d., besides a Swedish Fund entrusted to them by M. Drouyn de Lhuys, amounting to £1,272 19s. 11d. The latter sum was afterwards augmented by further remittances from Sweden to £6,300 2s., and by a Limbourg Subscription amounting to £393 Hrs., while the balance of our own Fund was increased by further subscriptions and the repayment of continental railway charges, partly by the companies and partly by the French Government, until it amounted to upwards of £4,000. The total sum thus available for distribution in the autumn was £10,933 16s. The useful application of this sum occupied the attention of the Executive soon after the last General Meeting. We aid them in this duty, they deputed Captain Delf to visit the districts relieved, for the purpose of reporting on the agricultural and economic effects of the operations of the Fund, in accordance with the authority given by the General Committee at its last meeting. The result of Captain Delf's journey was to demonstrate that the barley, oats, potatoes, vetches, and garden seeds, sent by the Fund had generally produced more abundant crops than the native kinds, but that the wheat had failed in most cases. Various causes have been assigned for this exceptional result. The Committee were constantly urged by the French authorities and agriculturists to send wheat, and nursery wheat being at that time the only variety procurable in large quantities for spring-sowing, it was sent by this Fund; and the same kind was bought largely in England by the French Farmers themselves through the ordinary commercial channels. The wheat was for the most part sown during the month of March, but a little even so late as the beginning of April. Circumstances had in most cases not allowed of the due preparation of the land, and the seed time was succeeded by three months of very unfavourable weather. The latest purchases of wheat made by the Fund were of an-

other description—the April wheat—which yielded a satisfactory crop, and it is interesting to remark that this variety has more affinity with the "Blé de Mars" of the country than any other English kind. The Executive, after consultation with M. Drouyn de Lhuys, resolved, with the approach of the autumn seed-time, to expend the balance remaining in the purchase of English autumn wheat, to be distributed in the first instance to those who had received our spring wheat, in the proportion of one-half the quantity previously given. In consequence of the difficulties of transport the Executive Committee appealed to the authorities of the Northern Railway of France for preferential transport of their grain, and to the Minister of Public Works to use his influence in obtaining this concession. The administration of the Northern Railway once more gave the Committee their valuable assistance by granting preferential transport, and a reduction of 50 per cent. on the cost of conveyance of our consignments; and the French Government showed their appreciation of our work by instructing the Custom House authorities at the various ports of landing to admit our corn free of duty. The principles of distribution having been agreed upon by the Executive, the Mark Lane Committee, through Mr. Pavy, purchased 2,700 quarters of red wheat, and Mr. Odams again undertook the shipping department, with his usual public spirit. The Executive were of opinion that this distribution, being conducted in a time of peace, did not require so numerous a staff of English representatives in France as the spring distribution, which was conducted under the double difficulty created by civil warfare and a hostile occupation of the country. In addition, most of the representatives of the Fund were no longer resident in France, and a new agency was therefore unavoidable in those cases. Fortunately, however, Col. Elphinstone was again able to undertake the distribution in the district of La Beauce, and the Executive therefore forwarded him 800 quarters of wheat for the purpose of giving half-quantities to those who had been disappointed of a wheat crop our spring seed. The districts of the North of France and Paris, including the Departments of the Somme, Aisne, Pas de Calais, Oise, Seine, Seine et Oise, and Seine et Marne, were consolidated into one, and placed under the charge of Mr. H. M. Jenkins, one of their honorary secretaries, who was fortunately able to associate with him Mr. C. B. Pitman, a member of the Paris Committee last spring. The seed corn for these Departments, amounting to 1,550 quarters, was sent via Boulogne, at which port M. Vaillant displayed the same energy in landing and forwarding the corn as he

had previously exhibited. The remaining 350 quarters of wheat were sent to the Departments of the Eure, Eure et Loir, and Seine Inférieure through Captain Delf. To him also the Executive are much indebted for his attention to the home business during Mr. Jenkins's absence in France. An examination of the statement of receipts and expenditure appended to this report will show that there remains an available balance in hand of about £1,000, and the executive recommend that they be authorized to distribute this sum to the most necessitous peasant-farmers in money, or in such other way as may be deemed most advisable.

By order of the Executive Committee,

B. T. BRANDRETH GRINDS, } Honorary
H. M. JENKINS, } Secretaries.
W. H. DELANO, }

The following balance-sheet was laid on the table:—

ABSTRACT OF RECEIPTS AND DISBURSEMENTS TO 30TH NOVEMBER, 1871.

<i>Dr.</i>						
To Subscriptions.—		Received as follows, viz.:				
	£	s.	d.	£	s.	d.
From Mansion House Relief Fund...	13,000	0	0			
" Sundry Contributions.....	29,159	4	7			
" Scotch Farmers' Seed Fund, their proportion of expenses...	45	6	0			
				42,204	10	7
To Foreign Fund.—						
Received from Sweden for distribution.....	6,300	2	0			
Received from Limberg for distribution.....	393	14	0			
				6,693	16	0
To Kingsbury and Co.—						
Allowance on Advertising.....				40	0	0
To amounts refunded by Agents being balance of moneys advanced for expenses at different depôts in France; also refunds for Railway Carriage, and sums received from sale of Corn, Seeds, Sacks, &c.				2,607	6	1
To Amount received on account of Mansion House Relief Fund.....				5	5	0
To interest on Deposit.....				31	6	9
				451,582	4	8

<i>Cr.</i>						
By purchase of Seed and cost of distribution, viz.—						
	£	s.	d.	£	s.	d.
Purchase of Seed	37,911	14	8			
Sacks	1,955	11	9			
Freight and shipping charges on Seed purchased and contributed Agents in respect of expenses of distribution.....	3,525	13	0			
[See amount refunded, per contra.]	4,229	15	0	47,643	14	5
By Expenses of Collection, viz.—						
Advertising	2,276	13	7			
Stationery and Printing	273	11	10			
Postages, Banker's charges, Gratuities, Salaries, and Office expenses	568	19	1			
				3,119	4	0
By Amount paid Mansion House Relief Fund.....				5	5	0
By Balance in hand at London and County Bank.....				814	0	6

* In addition to this balance, a sum of £164 7s. has since been refunded by the Paris Committee, and a further sum of about £230 is still due for wheat resold by the Mark Lane Committee. The total balance is thus about £1,200, and the liabilities may be estimated at £150 to £200.—
H. M. J.

£51,582 4 8

Audited and Passed,

(Signed) QUILTER, BALL, AND Co., Dec. 4th, 1871.

The CHAIRMAN said he did not know whether he might take the smallness of the attendance as an indication that the public generally were satisfied with the manner in which the operations of that Fund had been conducted abroad; but he did know that the occupations of agriculturists in London during that week were so numerous that it was almost impossible to get in any engagement of an unusual character. It was not necessary for him to make many remarks, because previously to the distribution of seed-corn, which took place last

autumn, the reports of the Executive and General Committee, entered fully into the past distribution; but as he might fairly assume that that would be the last general meeting, he could not help alluding briefly to the origin and progress of the Fund. They would remember that it was originated in October last year, through the sagacity of Mr. James Howard, member for Bedford, who was well known to all agriculturists; and that M. Drouyn de Lhuys, who had since rendered great assistance to the Committee, at once recognized the importance of distributing the seed to the necessitous peasant farmers. The question was referred to for the first time in public at a meeting of the Smithfield Club, and shortly afterwards a general meeting of those who were favourable to the scheme was held in that house. In the early part of their operations their progress was very much impeded—he was not complaining of it in any way—by the subscriptions demanded for other objects of more immediate necessity in France; but in progress of time, through the agency of different agricultural bodies, and through the assistance of the press, the general sympathy of the public which was created resulted in a subscription amounting altogether to £51,582, of which £13,000 was contributed by the Lord Mayor's fund, and £6,600, the principal part of which had been raised in Sweden, was entrusted to them by M. Drouyn de Lhuys, than whom, as they all knew, no man was more thoroughly acquainted with the necessities of French agriculture, and who was a person of very grave and thoughtful character. The distribution of seed for the summer benefited nearly 100,000 occupiers of land, of whom about 60,000 were supplied in almost equal proportions from Amiens and Tours, and the remaining 40,000 from Rouen, Paris, and Creil. After the last general meeting the executive committee had a balance in hand of about £10,000, and it was settled that they were to distribute that as far as possible among those who had received wheat which had failed. He might say that, in the distribution of corn in France, it was not to be expected that all the grain would be productive, but they had abundant evidence that in almost every case all, with the exception of the wheat, had succeeded beyond their expectations. That the wheat crop was more or less a failure was due partly to the period for spring sowing having passed before they were able to get the corn to the district, and partly to their want of information as to the quality of the seed which was best adapted to the French climate and soil. He believed that if the English agriculturists had been appealed to as a body they would have recommended their sending the nursery wheat which they did send, and that particular quality was bought as far as possible in the ordinary commercial transactions with France. They would have preferred to send the April wheat, and did send some, but it was not readily procurable in England. It yielded an abundant crop. The committee, feeling it to be incumbent on them to remedy any failure as far as possible, had devoted part of their funds to the distribution of a small amount of money to those who received wheat in the spring and whose crops failed. There was ample information on these points in the report of Captain Delf, and he thought they might claim credit for having given to the public full information respecting their operations, their failings as well as their successes. It had often been said in England that the necessities of the French peasantry were not so great as they were at first supposed to be, and that the recipients of seed had not been as grateful as they might have been expected to be. But he was prepared to give the fullest denial to both these allegations. It was true that the peasant farmers had money, but what was the value of money if they could not buy what they required with it? There was plenty of money, but no corn, and he was sure that in spite of a few failures, not only this generation, but those who would succeed them, would have a kindly feeling to the British agricultural public who rendered them assistance in the time of their need. The committee had abundant means of proving the gratitude, not only of the Government and the local authorities, but of the peasantry, who had presented them with testimonials, and had sent them medals, accompanied by letters, in which, with their usual effusion, they expressed their gratitude. The committee had received five or six medals from different districts in France, and the testimonials would form a large volume. He could not conclude without expressing his deep obligation, as the chairman, to the members of the committee who had served with him, for the industry with which they had devoted them-

selves to their work, the care which they had taken to ascertain to the best of their ability how the difficulties of communication could be overcome, how funds could be raised in England, and how it was possible to cope with fraud. If anything had lightened their labours it was the admirable manner in which their representatives abroad had co-operated with them. They had mainly worked through voluntary agents; and, indeed, where there had been any remuneration the amount was so small that it hardly amounted to payment. They were all of them under great obligation to the German Government for their assistance at the commencement of their operations. They were also indebted to the French Embassy at home, and if he might bring one name into greater prominence than another he should mention Mr. Odams, who had given them the advantage of his wharf and his services entirely free of any expense to the fund. The autumn distribution had been conducted entirely through the agency of Mr. Jenkins, and his colleague, Mr. Pitman. The committee could not possibly have surmounted the difficulties which they had had to encounter, without the valuable and intelligent labours and assistance of Mr. Jenkins. He could not, indeed, refrain from expressing his gratitude to all the honorary secretaries, one of whom (Mr. Brandreth Gibbs) sat next to him. They all took an active part in the operations of the Fund, and contributed aid by which a large amount of money had been saved. It was not without some pain that he parted from the contributors to that work. It was a great national work, and he was confident that it would sow the seeds of goodwill and of amity between the two countries.

Mr. WHITEHEAD, in moving the adoption of the Report, said with one exception, that of the failure of the early wheat, which was to be accounted for by the lateness of the season and the inclemency of the weather, the result of their operations and their effect on the French peasantry had been most satisfactory, and he was quite sure would do much to cement the two countries together.

Mr. CANTRELL, in seconding the motion, said he believed that Report would be exceedingly gratifying to all the subscribers, and he felt certain that it would be so to his neighbours in the Windsor district. He trusted that what had been done had made a lasting impression on the French peasant-farmers, and that future generations would bear in mind the assistance received in the time of distress from English agriculturists.

The motion was then adopted unanimously.

Mr. J. R. ROBINSON said he had been asked to move "That the executive committee be authorized to distribute the balance remaining to the most deserving peasant-farmers in money or in such other way as to them may seem advisable." The executive committee had showed so much judgment in their past proceedings that he was sure all who were interested in the fund would leave this matter in their hands with very great satisfaction. At the risk of falling into the monotony of compliments, unavoidable on that occasion, he must observe that all the information which had come before them through the operations of that fund, as well as that which had reached him from other channels, showed that the utmost care was taken by the Committee, as well as by those who represented them in France, that the distribution should be made to the proper persons and in the proper localities. He was very much struck, having been himself very intimately connected with a similar fund—the Peasant Relief Fund—with the amount of labour given by the Chairman and by Mr. Jenkins. Knowing the immense application involved in a matter of that kind, the multiplicity of details to be attended to, the correspondence involved, generally in another language, often technical and filled with names and references, and including allusions usually very difficult to trace and identify, he could only say that he was amazed that the gentlemen who undertook this work were able to devote the requisite amount of time to it. It must have left them very little leisure; but he was quite sure that at the end of their career there was no part of their lives to which they would look back with more satisfaction.

Mr. CANTRELL, in seconding the motion, said the only doubt he had was as to the proper distribution of the money,

but he thought that might safely be left to the committee, who had conducted this matter so well.

The motion was then put, and agreed to unanimously.

Mr. WELLS moved that the executive committee be authorised to present suitable testimonials to Mr. Jenkins and Mr. Odams in recognition of their valuable services. He took it for granted that it must be left entirely to the executive committee to decide in what form these testimonials should be presented. Neither Mr. Jenkins nor Mr. Odams would like him to say much in their presence with regard to the zealous and self-denying manner in which they had furthered the great object of the Fund; but he could not help remarking that with the onerous duties which devolved upon him as the Secretary of the Royal Agricultural Society, supplemented by those which he had so ably and diligently performed in connection with that Fund, Mr. Jenkins could not of late have had much leisure at his disposal.

Mr. PAVY felt very great pleasure in seconding the motion. He had been brought into closer contact with both those gentlemen than most members of the committee, and could therefore speak more confidently of the great value of their services. Having purchased the corn, it was his duty to hand it over to Mr. Odams for shipment; and he could testify that that gentleman afforded every facility for the fulfilment of the object.

The CHAIRMAN, in putting the resolution, said he did not think it possible to estimate the value of the services of those gentlemen, and he hoped that the meeting would agree, not only in adopting the recommendation of the executive committee, but in thinking that the executive committee were right in making the recommendation, and that they could not do otherwise.

The motion was then unanimously agreed to.

Mr. ODAMS said he was certainly much taken by surprise at the proposition Mr. Wells had made. When he undertook the duty which he had performed with so much satisfaction, he certainly did not for one moment think of such a thing as recognition. He could only say that if it took away one bushel of wheat from any deserving French peasant he should be very sorry. He regretted to say that the authorities had required a certificate from them with the corn that was sent which he thought was rather hard.

Mr. JENKINS expressed his concurrence in the observations of Mr. Odams. They all of them put their shoulder to the wheel as well as they were individually able, and he believed there was very little that they had done within the last twelve months that would not bear fruit in due season. The French peasants had nothing to do with the certificate Mr. Odams had spoken of. It was required by the railway authorities, to justify them in doing what the committee had asked them to do as a particular favour. This being the last meeting of the general committee, he could only express his thanks to the general body of subscribers, and also to his colleagues for their assistance in carrying on this occasionally difficult work. Mr. Robinson, who had had a great deal of experience in a work of a similar kind, had well described the amount of labour which had to be undergone.

Mr. WELLS moved a vote of thanks to the chairman and the executive committee. Having the happiness to have Lord Vernon's friendship, he knew how he had put aside private business and concerns to devote himself to that work, and he believed that the gratitude of the French peasant farmers would always be associated with the name of Vernon.

The motion after being seconded by Mr. KINGSBURY, was carried by acclamation.

The CHAIRMAN in returning thanks, said he had never been associated with a body of gentlemen who had given so disinterestedly and so conscientiously their services in a cause which they knew could not be carried to a successful result without the very closest care and attention. He well knew how much time his colleagues had sacrificed to secure a result which would bring credit to their country. That result was of a kind which he felt confident would bear the closest inspection, and he believed it would last for many years to come (cheers).

The meeting then separated.

THE YORKSHIRE SHOW AT YORK.

The important elements constituting the success of a show are the amount of prizes offered, the number of exhibitors, and the attendance of the public. In all these features the York meeting of this year stands well. First in the list, as first in importance, whether tested by merit or number, come the Shorthorns. Speaking generally, in all the classes there is good competition and high merit. In four classes we have 23 competitors. In class 1, best ox not exceeding 4 years old, Lord Zetland takes the first prize against four competitors, and also the President's cup for best ox in the Shorthorn classes. The competition here was exceedingly close, public opinion in about equal instances going for the second and the third animals. The prize ox is a grand white beast, upstanding and gay looking. He is very large, and true made, being covered evenly with capital beef. On his back he is especially good. He girths nine feet, and weighs we should say 120 stones of 14lbs. dead weight. His thighs are not as good as could be wished; but taking him all in all his whole contour is as near "the thing" as possible. The second is Mr. Pulver's roan ox, commended at Birmingham. He is a very fine Shorthorn with wonderful loins, but is not as heavy as the Zetland ox, while he is deficient forward. He is full of Shorthorn character, and in this competition for Shorthorn oxen only is entitled to second honours, although the third ox, belonging to Mr. Drysdale, Fifeshire, was fancied by many. This is decidedly the fattest animal, and the best butcher beast in the class. He has the same girth as the first-prize ox, but is three inches shorter, and is thicker of lean beef, and very true made. He is, however, rather bare on the back bone, coarse on the rump, and is not true on his top—bending in the middle of his back when he stands. Moreover, he does not look the Shorthorn so much as either of the two animals placed before him; and this is one important consideration in a competition professedly for Shorthorns.

In the second class for best ox not exceeding three years old, we have seven in the field, and here we must say that "another Richmond" was certainly wanted. As a lot the merit was mediocre; and the Yorkshire veteran, Mr. Wiley, wins only because there was not a better animal there, but individual merits of this one as an ox are that he is really a ripe and very fat animal. In character, however, he is more of a cow than a bullock, and his flesh is put on in lumps, as it used to be in Shorthorns of the old school, the mass of fat like a hump on the rump being anything but becoming to an ox. Cut this off, however, and he is still immensely before any other in the class as a ripe Shorthorn. Mr. Taylor's second prize is neat and small, as not quite up to the mark in condition. Mr. Lancaster's third prize ox is a stylish animal, very like making a great one; he is, however, light underneath, and shelly. Mr. MacPherson had a good butcher animal, but no style; and Mr. Paver's ox has no pretensions to be called a Shorthorn or a good animal. The best cow Mr. Willis certainly has in his Birmingham second-prize cow, now nearly 10 years old, and a really fat cow. Still she has her faults. Her beef is not the best kind, and she is very bare on the shoulder, and has lost all her beef underneath. Mr. Cattley's second prize animal has youth on her side, and is better quality of beef than the winner. She is a nice thick cow, but is short of size and style compared with her opponent. Sir W. Trevelyan, Mr. Hutchison, and Mr.

Reid, N.B., have useful animals in this class. For the best heifer, not exceeding four years old, Sir W. C. Trevelyan takes first, Lord Zetland second, and Mr. Robson third, in a class of five animals. The prize heifer is one of the best animals out this year—possibly the best in the yard. She wins the Corporation Plate for best female Shorthorn and Mayor's cup for the best ox, cow, or heifer in the showyard. She was bred by Mr. Stamper. Lord Zetland's three-year-old and ten months heifer takes the second prize, and Mr. Robson the third, with good animals.

In cross-bred animals there were only two classes. For ox not exceeding four-years, the prize went to Sir W. C. Trevelyan's three-year and five months red ox. This is an extraordinary animal, a perfect parallelogram in his outline; his neck, shoulders, and crops are perfectly filled up and level; wide as a barn door between his forelegs, and deep in the chine, he looked the heaviest beast in the yard. He girths, however, 8 feet 9 inches—three inches less than Lord Zetland's prize Shorthorn ox—and is the same length. He takes the Sheriff's prize as the best animal in the cross-breed classes. For the best cow of any age (cross-breed) there were six competitors. Mr. J. P. MacPherson's cow is a capital Shorthorn, if she had not had the black muzzle. Splendid in loin and crop, and of great length, she wins her place, though her flesh is not quite as firm as that of Mr. Reid's second prize. She is very capital, beefy, and a level animal, with the exception of being light of flesh forward. Sir W. C. Trevelyan has a good commended cow, and Mr. Reid also two other good animals in this class.

In the four tenant-farmers' classes the competition was not numerous. Mr. Dickenson, Market Rasen, took first, and Mr. Nelson, Barton Hill, York, second, for Shorthorn ox of any age. Mr. Dickenson's animal also secured the cup for best animal in all the tenant-farmers' classes. Both these beasts were of great size; but Mr. Nelson's had more quality and more merit to our eye. In the cow class the first prize was also Mr. Nelson's. She is a fine-shaped cow of great size, full of flesh, and thick through her. Mr. Webster's second prize is smaller, but very neat and compact; and Mr. Emmerson's third prize is a great good cow, but short of lean flesh. For the best ox, cross-bred, of any age, the property of a tenant-farmer, the first prize was given to Mr. Langdale's white steer, a prime young animal full of quality and good looks. The second went to a big blue-and-white ox, the property of Mr. Emmerson Darlington; he is a huge misshapen lump, and his merits are those of the scale only; in this point only does he beat Mr. Lund's black commended ox. Mr. Lund's ox has capital quality, but is very deficient in his flank. The best cow or heifer, of any other breed or cross, not exceeding 4 years, was Mr. Lund's 2 years and 7 months red Norfolk polled heifer. She is a thick, level mutton in parvo. Mr. Stephenson's second is a great, good cow, which we should call a Shorthorn, but we are assured she is a cross-bred, and eligible to compete in the class. Of the Scotch breeds there were four classes. Mr. Read, N.B., had the best polled ox, and Sir W. C. Trevelyan 2nd; Mr. Reid also took 1st for best polled cow or heifer, and Mr. MacPherson second. Mr. Reid's ox is a fine level animal, even throughout, neck and crop filled up to loin most beautifully, and the shoulder buried in flesh. Better beef cannot be; while in shape he has

no more angularity about him than one of Barclay and Perkins' hogsheds. The cow from the same stock is all this and something more; she is younger, and has a sweetness of character that springs from her sex. We think her well entitled to dispute with Sir W. C. Trevelyan's heifer for the title of Queen of the Show. Mr. Reid's ox took the £20 cup for best Scotch-bred animal. In the horned Highland ox class Lord Harewood took first and second with two good animals. The first prize is beef to the ground—a perfect black cloud. The first and second prize in horned Highland cows Mr. J. Harrison, Skipton, took with a pair of neat animals.

The district prizes for tenant farmers brought out fair competition. For ox of any breed, the first and the York butchers' cup for best animal in the district classes went to Mr. Tasker, Naburn, York, for a large useful plain beast. Mr. Robson, Easingwold, took second with a neat animal of Shorthorn character, not fully fed up. Mr. Lund's 3rd prize beast is big enough, but not level. The district cow class was a very good one. Mr. Kirby, of Wilberforce, York, took first with a fine roan, 3 years and 10 months' heifer, and the 2nd went to a sweet heifer 2 years and 5 months old, full of quality and style, belonging to Messrs. Brogden, Tockwith, York, a Short-horn in everything but name and nose. The 3rd prize was taken by Mr. Tasker, Naburn, with a good Shorthorn cow 6 years old. Long and low, and well filled out, she is a good carcase of Christmas beef.

The Sheep entries were good, except in the class for Leicester wethers under 22 months, in which Mr. F. Riccell, Warton, Pocklington, took the prize without competition with three very good specimens of Yorkshire Leicesters. In the South or other Down wethers, Lord Zealand took 1st and 2nd with two pens of prime fat sheep. They also obtained the cup for the best pen of sheep in the yard. His Lordship had a third pen, which were commended. Capital sheep as these are, we should like to know what kinds of Downs they are? Shropshires they surely are not! Lord Wenlock's Shropshire Downs, though beaten here by carcase weight, are not disgraced, though inferior to the winners in fat on the back. The horned Scotch or mountain wethers and also the cross-breeds were well represented by Mr. Hobson and Mr. Agar, who each took first and second in those classes respectively. Mr. Knowles, of Wetherby, showed some capital pens here: they were, however, a year too young, and will be heard of again. For best sheep of any age Lord Wenlock took first with a two-shear Shropshire Down wether, and second with a one-shear gimmer of the same breed in a competition of seven.

Of the pigs we may premise that, even in Yorkshire the competition has seldom been equalled. In seven classes there were 55 entries. In large-bred pigs Mr. Duckering, Kirton Lindsey, came first, Messrs. Cooper, York, second, and Mr. Mangles, Ripon, third. In pigs of the small breed, exceeding twelve months old, Messrs. Sedgwick, York; Mr. Fall, York; and Mr. G. Hutchinson, York, took the honours in the above order. For best pig (small breed), under twelve months old, Mr. Bramill was placed first, Mr. Duckering second, and Mr. Knowles third. For best pig (middle breed), exceeding twelve months old, Mr. Knowles, Mr. Duckering, and Mr. Barton came in first, second, and third. The best middle-breed pig, under twelve months, was Mr. Ambler's Halifax; Mr. Bramill and Mr. Leaf taking first and second. The best pen of three pork pigs produced great competition, Mr. Snowball, Stockton, York, took first, most deservedly; Mr. Taylor, second; and Mr. Hill, York, third. There were also some commended pens. Extra stock: The first prize went to Mr. Hill, York, and the second to Mr. H. Falkingham, York.

A specialty at this fat show is the exhibition of bulls and boars. In the boar classes, Mr. Blake, York, and Mr. Sedgwick, York, took the first and second in the large breed class; and Mr. Falkingham and Mr. Knowles did the same in the small breed class. On the whole, the pig show has never been surpassed at York. Mr. Duckering's pig of large breed, Mr. Sedgwick's small-bred pig, and Mr. Knowles' middle-bred pig above twelve months, are animals that can scarcely be matched.

The two classes of young bulls produced interesting competitions. For the bull between the age of six and twelve months, eleven animals entered the ring. Major Stapylton's first prize is a very straight calf, and has capital colour and handling. He is most promising, in natural condition, and will train on. Mr. Mause's second prize is a thick handsome fellow. He has evidently been well done by, and is perhaps as good to the eye as he ever will be. Mr. Worsley showed a thick deep calf full of hair, well fleshed, and no mean representative of the Booth blood; and the Hon. Egremont Lascelles sent a pretty calf; he is in store condition, and only wants a chance to grow into something more than common. In the class for bulls between one and two years old, Mr. Thomlinson, Cowthorpe, took first with an animal bred by Capt. Gunter; he has all the handling of the fashionable Wetherby family, but is very wrong in his hoofs. Mr. Linton's yearling bull is a very good second; he is already known as a public animal. Mr. Cattley's third prize bull is a deep-fleshed true made animal, and fit for a prize. There were eight animals in this class, nearly all of whom were worth notice.

The poultry was a great show, numbering 355. Any attempt to describe them, had we time to accomplish such a work, would have been frustrated by the peculiar manner in which they were arranged. Instead of the baskets being placed numerically in the order of the catalogue, they are so mixed up that they cannot be taken as they are entered, and examined consecutively. The rabbits are in wonderful force, 117 lots; and the pigeons may be truly termed marvellous, there being no less than 198 pens of these in "fancy" birds. They were a great feature of the show, and are evidently popular with the young and the fair sex, who remember their usefulness on a recent occasion in mitigating one of the evils of war. The roots were not as good as we expected: but the exhibition of butter was excellent. A fancy design in butter, by Mr. Wihely, Easingwold, is a marvel of execution and design rarely equalled in wood or stone; fruits, leaves, birds, eggs, and animals are represented with a fidelity and truth to nature most admirable; it is a work of art which we certainly did not expect to see produced with such a material as butter.

THE DOUBLE PLOUGH TRIALS AT REEPHAM.—A somewhat stormy correspondence is just now being carried through the Norfolk journals. The Messrs. Howard, of Bedford, say, "If the calculations had been properly worked out at the trials, instead of our plough being placed second, it must have been awarded the first prize, inasmuch as the judges stated they had been guided by the dynamometer and given the prize to the plough of the lightest draught." Whereas, the Stewards, Messrs. W. E. Overman, J. W. Howlett, and Henry Dye say: "Since the trial one of the judges has told us that, independently of the lightness of draught, the L S D plough of Messrs. Hornsby stood first in their estimation, and it was gratifying to them to find that the dynamometrical test confirmed the opinion they already formed." And again, "We wish to add that we feel regret that Messrs. Ransomes, Sims, and Head should attempt to disparage a contest in which every endeavour was used to ensure a correct and satisfactory result, and must express our surprise at the correspondence that has appeared in the papers as having passed between Messrs. Eastons and Anderson and their firm."

THE ROYAL DUBLIN SOCIETY.--WINTER SHOW IN DUBLIN.

In consequence of the prevalence of foot-and-mouth disease, there were no fat cattle exhibited. The show was, therefore, confined chiefly to agricultural produce. The cereals were of good quality, but not more numerous than usual. The root and other green crops, while equal in quality to any yet held, were more numerous than any brought together at any former meeting, which was owing to the magnificent collections brought forward by the first, second, and third class model school farms scattered through Ireland under the Board of National Education, and which occupied upwards of 2,000 superficial feet of staging, taking in the whole surround under the galleries of the central hall. For a few years past the model farm schools had a private show at Glasnevin, after which the collections were exhibited at the Dublin Society, but so huddled together that they created but little interest. This was the first time that the Board submitted the produce of their model farms to the adjudication of the Society's judges, and an arduous duty it was, numerous items in the several collections being fully equal to those staged by private growers, and when the juvenile character of the operations are taken into account it must give a foretaste what may be expected, from the mountain sides to the deep valleys, in the most remote districts, when these well trained agriculturists go home, and become scattered over the country. It was, therefore, a well devised and happy union of two such important bodies as the Royal Agricultural Society, now 140 years old, and the National Board of Education, to join in this exhibition; and show, not only Ireland, but the world, what they are doing in agricultural improvement. There are upwards of 150 model school farms scattered over the country, 50 of which have voluntarily come forward in competition with each other and the central establishment at Glasnevin. Mr. Baldwin, the general superintendent, has long been at work to bring about this union of interests, and has at length succeeded. Amongst the first-class farms, the Albert Model Farm at Glasnevin, takes the chief place, which was unquestionably deserved, but it was hardly fair for the mother establishment to compete with her children. The first and second class schools get but medals at the expense of the Society, but the third class get money prizes, for which the National Board has given in the aggregate fifteen sovereigns.

As usual, the samples exhibited by private growers were of first-class character, both in grain and roots, but the trickery of over-feeding was still apparent in the roots in coarse exteriors, elongated crowns, and hollow hearts. General collections from private growers, heretofore so well contested, have dwindled down to a solitary but very superior one, brought forward by Colonel Tottenham, Woodstock, county Wicklow.

The section for the produce of workhouse farms contained only those from the South Dublin, North Dublin, and Tullamore Unions. Of Irish manufactured tweeds, Martin Mahoney and Brothers were the only exhibitors, but the goods were of first-class material and highly finished.

The show of poultry was the best ever seen in Ireland, consisting of every known improved variety, and with the pigeons numbering over 400 pairs. The entire show was very creditable, and the general arrangement conducted with Mr. Corrigan's usual ability.

PRIZE LIST.

JUDGES.—GREEN CROPS: W. Kelly, Portrane; Dr. Moore, Glasnevin Botanic Gardens; W. J. Goode, C.E., Fingles.—

CEREALS AND PULSE: D. Drummond, Dawson-street; J. Farrell, Capel-street.—BUTTER AND HONEY: W. Jury, College-green; J. Byrne, Kevin-street; B. Murphy, Clare-street.—WOOL: J. Ganly, Usher's-quay; J. F. Dixon, James-street; R. Milner, Queen-street.

CEREALS.

White wheat.—First prize, P. Riall, Old Conne, co. Dublin; second, M. Byrne, Newcastle, co. Wicklow.

Red wheat.—First prize, Capt. Thompson, Hollywoodrath, co. Dublin; second, Lady Whitehead, Graystones, Wicklow.

Barley.—First prize, J. Trim, Newcastle, Wicklow; second, M. Byrne.

White oats.—First prize, J. Trim; second, Captain Thompson.

Black oats.—First prize, Lady Whitehead; second, T. Franks, Malton, Cork.

Beans.—First prize, T. Smith, Leamore, Wicklow; second, Captain Thompson.

Peas.—First prize, Col. Tottenham, Woodstock, Wicklow; second, S. A. Rickards, Gorey, Wexford.

Irish flax seed.—First prize, J. Patton, Glaslough, Monaghan; second, D. Patton, Tyranny, Monaghan.

GREEN CROPS.

Purple kohlrabi.—Prize, T. Smith.

Green kohlrabi.—Lord J. Butler, Drumcondra, Dublin.

Field onions.—Prize, Lord J. Butler.

Potatoes.—First prize, Lord J. Butler; second, M. Byrne.

Long red mangel.—First prize, Lord J. Butler; second, Lord Bunbury, Moyle, Carlow.

Long yellow mangel.—First prize, Lord J. Butler; second, S. Mowbray, Queen's co.

Red globe mangel.—First prize, Lord J. Butler; second, Col. Tottenham.

Yellow globe mangel.—Lord J. Butler; second, S. Mowbray.

Any other variety of mangel.—First prize, Lord J. Butler; second, S. Mowbray.

Cabbage.—First prize, Lord J. Butler; second, Captain Thompson.

Rape.—First prize, S. Mowbray; second, Colonel Tottenham.

Flax (Hempscutched).—First prize, D. Patton; second, J. Patton.

Flax (Millscutched).—First prize, D. Patton; second, J. Patton.

Irish hemp (scutched).—First prize, J. Patton; second, D. Patton.

BUTTER.

Butler in cools.—First prize, D. Patton; second, Miss Jones, Newcastle, Wicklow.

Butter in firkins.—First prize, D. Patton; second, Mrs. Hanlon, Grange Falton, co. Carlow.

GENERAL COLLECTIONS OF FARM PRODUCE.

Private growers.—Prize, Col. Tottenham.

General collections from workhouse farms.—First prize, South Dublin Union; second, North Dublin Union; third, Tullamore Union.

COLLECTIONS FROM THE NATIONAL EDUCATION MODEL FARMS.

First class.—First prize, — Smith, Albert Model Farm, Glasnevin, Dublin; second, J. Kenny, Limeric; third, T. McCabe, Gormanstown, Tipperary; fourth, W. Deane, Munster, Cork; fifth, M. O'Brien, Uster, Belfast.

Second class.—First prize, T. Madden, Woodpole, co. Meath; second, L. Ryan, Garryhill, Fernagh.

Third class.—First prize, S. Groghegan, Whitechurch, Tipperary; second, unknown; third, D. O'Dowd, Doocastle, Sligo; fourth, — Hergaton, Fivemiletown; fifth, T. Falton, Lough Glynn, Castleragh, Galway; sixth, P. Flood, Tullycrine, Kilmsh.

WOOL.

Long wool.—First and second prizes, S. Mowbray.

Short wool.—First and second prizes, S. Mowbray.

Irish manufactured tweeds.—Prize, Martin Mahony, Brothers, Blarney Mills, Cork.

THE SMITHFIELD SHOW WEEK.

At the Farmers' Club dinner on the Tuesday, Mr. Horley, one of the stewards at Birmingham and one of the judges in London, said "Foot-and-mouth disease was now so rife, and had become such a universal epidemic, that some persons thought it should be stamped out as the cattle-plague was. He himself believed that the half-measures at present in operation had no tendency whatever to check the disease, while they were certainly a great hindrance and annoyance to numbers; and unless the owners of stock and the public were prepared to revert to the rigid regulations adopted in the case of rinderpest, he could see no end to the evil." Here arises the very pertinent question *are* the owners of stock prepared to revert to these rigid regulations? As the answer most assuredly is that they are *not* willing to do so. On the opening morning of the Smithfield Club Show the opinion of many leading agriculturists went to declare that the agitation over this matter was for the most part idle and useless. At the general meeting of the Smithfield Club on the same day, Mr. Giblett, who spoke as representing not merely his own feelings and experience, but the opinions also of a great many influential graziers by whom he is employed, expressed "a hope that the meeting would see the necessity of sending a deputation to wait upon the Privy Council to ask for a modification or the removal of many of the restrictions relating to foot-and-mouth disease"; while Mr. William Torr said that foot-and-mouth disease did grazing steers and growing stock very little harm. It is, in fact, plain on the face of it that the proposed panacea for slaughtering foreign stock at the landing ports would do little or nothing to check the progress of such diseases as those the home-producer is now suffering from. Foot-and-mouth disease came into the Agricultural Hall either direct from Birmingham or from the owners' own stalls, there not being, we believe, in a single case, any suspicion even of foreign contagion. However, this line is still held to in some quarters, and it is thus possible that early in the new year two companion deputations of farmers may seek audience with the premier, the one body to urge that the restrictions on the home trade may be abolished, and the other to ask that the restrictions on the foreign trade may be increased. Of a truth, there would seem to be rather too much of this sort of thing. During the week animals have been continually falling in the Hall, if but few or none of these were removed; although on the Friday many of the exhibitors were on application refused permission to pass their beasts out of London back home again, or on to other shows. Of course spontaneous appearance or induction from excitement and suffering, would be utterly absurd explanations of the outbreak at Islington, and yet further than this there is not an atom of evidence.

In the collateral business of the past week the meeting most in season with the cattle show was that at the Farmers' Club, where breeding facts and principles came under consideration at the instance of Mr. Fowler, of Aylesbury. The "facts" of the opening address must have been tolerably well known to everybody; nor was any very particular principle from these premises put with much emphasis. Still the paper will do good if it only induce people to think more of the subject, although the occasion was certainly not up to the standard of a show-week discussion. The dinner of the Farmers' Club was far more successful, the company being held together to the

last, always a sure sign of people not having wearied of an entertainment. But we, of course, give full reports of both these meetings. At the Society of Arts on the contrary, whither sewage failed to attract the farmer, Mr. Bailey Deaton delivered himself of an almost interminable essay, the reading of which occupied some hour and a-half, and necessarily interfered with any further debate, as these meetings are limited to two hours each.

The chief matter for congratulation in the report from the Council of the Central Chamber of Agriculture is the organisation of branch Chambers. Indeed, as we have from the first maintained, the most useful feature of this scheme has been the establishment of local Chambers, which are simply Farmers' Clubs with occasionally more scope. And a country Club has with few exceptions, ever had something ephemeral in its character. How many have we known flourish and fade, as we notice that the non-paying indifferent members have already become a difficulty with some of these local institutions. The question of ways and means, however, would seem to be a yet more serious case with the Central Chamber itself, where, according to the financial statement, "the arrears are very heavy," in spite of the "repeated applications made by the Secretary for payment." This does not sound well for a comparatively young Society, if something of the cause of any such apathy should be tolerably apparent. The world soon grows weary of people who are always begging under some plea or other, and local taxation, cattle diseases, travelling expenses, and so forth, have been tolerably well worked in this way. On the other hand the Royal Agricultural Society has, we believe, now brought its arrear list under reasonable control; while by the Report, "the arrears of the Farmers' Club have never been more closely collected." The Royal Society, however, has been losing money of late, chiefly from the protracted trials of implements, a business of which none are probably now more sick than the implement makers themselves. At Wolverhampton the very useful results could have been obtained at half the cost of labour, time, and funds; while the public evinces the very slightest interest in the proceedings; and further, we have little doubt but that if the Council does not deal resolutely with this preliminary part of the programme, the competition will gradually fall away. In a word, this business "does not pay"—anybody, and Lord Vernon's Committee must reform it altogether.

A WHOLESOME MOVEMENT.—At the meeting of the Banbury Agricultural Association, a premium was offered by Mr. Perry for the best general crop of swedes from seed supplied by, and on land manured with artificial manure purchased from Mr. Perry. The prize was awarded to Mr. N. Stilgoe. Mr. Z. Stilgoe asked why Mr. Perry could not offer his prize like Mr. Bartford without any restriction whatever. Mr. Davis: They should be invited to throw them open. Mr. Smith: They will be safe to decline. It will be in a manner refusing them if you don't accept them on their conditions. Mr. Rusher: If you carry out this you will have to go back upon your ploughing prizes. Mr. Berridge said there was not so much expense incurred in judging the ploughing as the roots. It was agreed that it was not advisable to continue to receive prizes for root crops containing restrictions as to the purchase of seed and manure after the present year, and the donors should be invited to offer them for open competition.

THE SMITHFIELD CLUB SHOW.

THE OPENING MORNING.

At the November meeting of the Council of the Smithfield Club a letter was read from Mr. Robert Wortley, a well-known exhibitor, suggesting that no animal sent to Birmingham should be eligible for entry at Islington. Of course the most manifest effect of any such a condition would be to reduce the standard excellence of either meeting; while no question the Midland Society would suffer the more of the two from such an arrangement, as "the best of everything" proverbially comes to London. However much or little the Club may feel inclined hereafter to entertain such a proposal, the principle has this year, from mere force of circumstances, been adopted by the management. A number of the beasts sent in from Birmingham have been pronounced by Professor Simonds and his fellows to be labouring under disease, and to be consequently inadmissible at Islington. As we have already said, a crowded building and continual excitement are probably more conducive to the development of such disorders as those our stock now suffers from than we have so far been disposed to allow; but it is very noticeable that up to late on the Thursday afternoon no case of disease had been discovered in Bingley Hall! The veterinary inspector, was, as we are assured, very zealous in the discharge of his duties, where he found nothing wrong; and yet no sooner do the same animals, after a few hours' journey by special train, come again under official examination than they are declared to be unmistakably diseased. It is said, on the one hand, that any such ailment is of the slightest and most superficial character, as, on the other, that many of the beasts are actually *recovering* from severe attacks. It is only to be hoped that the fullest possible report will be presented to and published by the Club at the very *earliest* opportunity. Were the veterinarians of the Midlands at fault? or, can disease be developed in a few hours' journey? or, are we more or less the victims of a Panic?

Even further, some animals which had been sent direct from their home stalls were also condemned, while in some of the divisions, such as the Shorthorns, and more especially the Herefords, the original entries were below those of last season. It was consequently fortunate that more of the Birmingham beasts were not east, as these served materially to strengthen, if not to "face" the show with its chief ornaments. Thus Mr. Stratton's white ox was still the first of his class, with Mr. Farthing again second, as it may be as well to say here that the judges divided over the best of all at Birmingham, the pretty general opinion in the Hall this morning being in favour of the Shorthorn. Mr. Bruce's Polled heifer, however, held her place here again at the head of the class, but was manifestly amiss. Again, the best Shorthorn steer in the middle-class, Mr. Bruce's beast, was also first in Birmingham, where Colonel Lindsay's second was then third; but disease had cut down the competition to the three prize animals. The best Shorthorn cow was also the best at Birmingham, while the third, Rose of Windsor, a purchase at the late Mr. Foljambe's sale, was a winner in the breeding shows last summer at Brigg, Peterborough, and Liverpool. Saving in the second class of steers, there were not many Shorthorns absent, while we must borrow from our last number something of that which we have already said of the best of this breed: "Mr. Richard Stratton's 'walking advertisement' for the Burderop herd,

has gone on famously. He is a particularly handsome beast, and has continued to feed very level, as in fact for his weight and size it is not often that a better balanced ox has been brought out. He is very good to meet, has a neat bloodlike head, and, a great point, is better out than in his stall, so gay is his carriage and so smart his appearance. His touch is wealthy enough for that of a Hereford, or, as some superfine connoisseurs might call it, rather strong, but in our times this is a fault in the right direction. Moreover, the white steer is 'well-connected,' for his grandam on the sire's side, Diadem, was a gold medal cow at the Smithfield Club, and his half-sister, Village Rose, 'a very sweet lengthy heifer, with every promise of growing into a handsome cow,' was the first prize calf at the last All-Yorkshire Meeting, where she beat the second prize calf from the Wolverhampton Royal. By Bude Light out of April Rose this ox is a twin, but the other went wrong and died young. As is well-known his breeder, Mr. Richard Stratton, died a few months since, and the ox was entered here by one of the sons, Mr. Joseph Stratton, so that he was ineligible for the combined fed-and-bred premium. Otherwise, up to a certain point, he won everything he could easily enough, as, beyond his class, when it came to the best of all the Shorthorns, the judges had the winners in the several classes paraded just for form's sake, and then arrived at an instantaneous decision. We quite expect to see the white ox do as well in London as he did at Birmingham, if not even better, for with three Shorthorn judges against a mixed bench, the Shorthorns have now always 'the pull' at the Smithfield Club when it comes to a comparison of breeds. Further on it was not by any means a great show of the sort. The best beast at Oakham, Colonel Reeve's great red ox, was not here—not that he could have made any great mark."

Colonel Reeve's ox is at Islington, where, as we expected he has made no mark. Of the cows we said at Birmingham that Sir Walter Trevelyan's "winner was a long way the best of them; and a good straight heavy-fleshed cow, with a capital touch and a broad back, but somewhat steery in her character. The Princess of Oxford, for so is she called, is a half-sister to the Princess of Yetholm, the best cow in Birmingham and the cup cow in London, two years since, and the one bears a striking resemblance to the other, having just the same flashy red-and-white markings in her coat, and the like beefy look about her—a sort of animal which you fancy more in the stall than on the pastures." And Princess of Oxford is again the best here.

Numerically the Devon was the best filled section in the Hall, but much of the collateral interest was destroyed by certain disqualifications. Thus, Mr. Senior's best of all the Devons at Birmingham was out of it from disease, and hence no line from previous performances could be taken. Her Majesty's young steer, however, was first in the Midlands, where Mr. Smith's first in the next class was second to one of Mr. Taylor's not entered against him here. Neither the first nor second Devon heifers were at Birmingham, where Mr. Senior's senior third was first. The famous old Actress from Flitton was at eleven years and a-half old the best cow, although she has quite gone in her quarter, with the better butcher's beast, Musk, as her second.

The Herefords ran up to a very short show, where one of the best was a fresh cultry from Mr. Heath of Mr. Meire's breeding, a very handsome ox forward, with a good touch, but mean in his quarter. The best of all the Herefords at Birmingham was not here, and the third in the old class, was, as we expected, no prize-taker in London. There seemed to be question of age hanging over the youngest class of Hereford oxen, as no placards had been put up when we left; but in the next division Mr. Groves' third at Birmingham, and a nice animal out, was now first, his conqueror in the Midlands, Mr. Pike's steer being well out of the way in the preceding class; and Mr. Bettridge's second here displaced. Her Majesty's heifer was still the best of her class, as no doubt one of the best of a moderate display of Whitefaces.

Mr. McCombie's famous dun Highlander was fairly beaten by a better beast, and at most points a good one from Luton Hoo; while the best Polled ox at Birmingham also found his superior in a more stylish beast, bred and fed in Norfolk; Messrs. Martin's entry being scratched. A good show of Sussex we did not see out; there were a few red Polls and fewer still Longhorns, one Welsh ox in the entry, and two Irish, where the winner looked like a Shorthorn. The Crosses were better than in the Midlands, but what kind of a cross is that between a Shorthorn bull and a Lincolnshire cow? It certainly seems to run all one way.

As usual, the Keythorpe flock has a long lead with its beautiful high-bred Leicesters; while four Cotswolds in two classes and four Lincolns in two classes can scarcely command either hasty or deliberate notice, but Mr. Byron's wethers are really good. The Southdowns were much above the Birmingham entry, and the Prince of Wales' pen in the first class never caught the eye of a judge; Mr. Rigden's good backs reviving the Hove repute in the first class, and Sir William Throckmorton's thoroughbreds having deservedly the call amongst the light weights. The Shropshires and Oxfords both ran to short entries; it being a very near thing between the first and second pens of Oxfords, although ultimately the better quality of the Blenheim pen carried the award.

The three classes of white pigs were all moderate, and the blacks and other breeds far better; two or three small classes being generally commended. In our report of the Birmingham show we said that "far away the best were Mr. John Biggs' Berkshires, which might have taken any extra premium as the best of all, instead of merely the best of two classes;" and at the Smithfield Club this same pen of Berkshires takes the Cup as the best of all.

DURING THE WEEK.

It is becoming more and more apparent that the stewards of stock shows have occasionally graver duties to discharge than merely putting the animals in their places, or ordering them out again for the inspection of the judges. As we have already attempted to demonstrate, the evils attendant on the exhibition of pigs can only be corrected by far more resolute action on the part of the management, as some closer supervision of the entries will be clearly necessary in other directions. At the recent meeting in the Midlands an ox took a prize as a cross-bred beast, being described in the catalogue as by a Shorthorn out of a Lincolnshire cow; on inquiring as to what a Lincolnshire cow might be, we were informed by the exhibitor's representative that this was an old Longhorn breed, whereas we had imagined that the Lincolnshire cow had been beyond the memory of man to all intents and purposes a Shorthorn. Attention was, we believe, called to the case by one of the stewards at Birmingham, but he was over-ruled, and

the same ox came on to Islington, where on Monday he again took a second prize, when, as our readers will remember, we pertinently put the question in our opening report of the same afternoon, as to "what kind of cross is that between a Shorthorn bull and a Lincolnshire cow? It certainly seems to run all one way." Subsequently the stewards took the matter up, and on the day following the prize placard was removed, and the subjoined notice substituted: *Disqualified by the stewards—breeder's certificate incorrect.* This is perhaps not so precise as could be desired, as assuming that the certificate had been satisfactory, would an animal by a Shorthorn bull out of a Lincoln cow be passed by the Club as a cross? As we take it, a Lincoln is much the same thing as a Yorkshire cow, that is, a Shorthorn sometimes with, and sometimes without a pedigree. We are induced to dwell the more upon this matter, because it is affirmed that beasts have won before now as cross-bred, when these were in fact bred all one way. At a fat stock show none are more interesting than the entries in these classes, as many of these experiments result in the best of butcher's meat; but it is of course as requisite that the particulars as to how such animals have been produced should be as correctly given, as is required in the case of the pure breeds.

Having already said so much of many of the animals exhibited here, it is not our purpose to go again very minutely over the small show of the Smithfield Club in 1871; as whether from subsequent misapprehension or original intent, small this was in many of the leading classes of both cattle and sheep. Indeed some of the general commendations which appeared in the first list have since been struck out, as such an appendix had often little or no actual meaning. Thus in the youngest class of Hereford steers there were but two beasts in competition, one of which received the first prize and the other second, as precisely the same thing happened with the Hereford heifers, which was again reduced to match between her Majesty's and Mr. Allen's nice lengthy heifer. There was more competition amongst the Hereford oxen, where Mr. Heath's best, who never had a chance for the Champion plate, was still so immeasurably superior to the others brought out against him, that a general commendation seems as inexplicable as that over the Shorthorn cows at Birmingham. The fact of such a thoroughly moderate patchy animal being put second does not say much for those behind him; and Mr. Bettridge's "best of all the Herefords" was not entered at Islington. Although alarmingly short of numbers, the Herefords, thanks mainly to some fresh white faces, made a better show than they did at Birmingham: the first and second cows in Bingley Hall being amongst others here deposed by a far more comely cow, which has in turn been a winner about home in Shropshire, and later on in Norfolk; though Mr. Wortley declines to risk a trial immediately previous to the London week.

Amongst the Shorthorns there was but little new blood of much mark, and there is consequently little more to be said of this section than that we have said already, and this was no great deal. In fact, had the Wiltshire white been kept out in the cold by the veterinarians, it is difficult to see where the Shorthorn judges could have gone for their champion. In the heifer class there were, no doubt, some nice well-bred and well-fed animals, led off as these were by Mr. Kennard's really sweet heifer Christabel, against whom Mr. Tidy's Birmingham first had not the ghost of a chance. The Midlands award, however, was no doubt a mistake, for, as we wrote at the time, "the winner is the plainest and commonest of the three prizes, as we should doubt very much her holding her own in London;" and at Islington the Tamworth heifer was not even com-

mended. As something of a curiosity in these steam-plough-times, it was stated that the third prize Shorthorn ox had been put to plough.

Still fated to be near, if never to be quite first, the Devons, as a breed, either for general merit or numerical strength, made up the best section in the show, and this notwithstanding the banishment of "the best of all the Devons" of the previous week; while his second in the class and "the best ox bred and fed by an exhibitor" at Birmingham, now took no prize whatever, although his great opponent was so conveniently out of the way. The class here was certainly commended, and deservedly so too; but then the judges put at the head of it a beast that was only third in the Midlands, where he never seemed to be put in comparison with Messrs Senior's and Smith's entries; as we must hold that the Exeter ox was overlooked by the London judges. As placed against the Somerset, we infinitely prefer the previous award, and as we should go still stronger against the great, patchy, coarse steer put second. In judging a Devon, under any circumstances a man must keep in his mind's eye a certain neatness of frame and "best beef" quality, which the Young Exeter possesses in a very eminent degree. On the face of it there is something incongruous in a third prize beast from Birmingham being selected by a set of judges as their champion in London, and of course there was virtually no race when it came to trying conclusions with the Shorthorn. Otherwise, the Islington trio held very much to the Midland line, save where interrupted by accessions or omissions. It should be mentioned that Mr. Pope had to stand aside in the class of Devon heifers, being the breeder of Mr. Jefferys' second prize, and that for a similar cause Mr. George Smythies took no part in placing the old class of Hereford oxen. This reads rather awkwardly when a man selected as one of three specially appointed for his knowledge of a particular breed has no voice where probably his influence is more particularly required. For instance, was the class of *Hereford* oxen generally commended by the *Devon* judges?

The casting out of Messrs. Heasman's and some other entries told much against the show of Sussex, of which, however, the oxen and cows ran to two very good classes. Mrs. Coote won with a very stylish beast, and the best cow from Beckley is a straight, clean, good animal, which has not lost her feminine character, and the class was commended, but then it only reached to four entries. The best Norfolk Poll had done but badly, and his place did not say much for the sort; and although the judges added a commendation to the awards in one class and found no merit in the other, the "other Scotch breeds" are more or less of a failure. The first prize ox of this other breed is described as a "Scotch Highland," but then, what is the difference between a Scotch Highlander and a Highland Scot? As we said in our Birmingham report, Mr. Bruce's Poll rather lacks scale, as this may stay her from reaching quite to the top of the tree in London; but beyond this she was clearly "off" at Islington; although under any circumstances we do not think that the previous reading would have been confirmed. There was certainly some threat of calling in an umpire between the two sets of judges, but public opinion went all with the decision in favour of the Shorthorn, not the best steer in the late Mr. Stratton's opinion which he ever bred, although he serves to make a very good beginning for the son. In fact, the younger Strattons and Seniors threaten to quite eclipse the old hands. One of the prettiest crosses was, by the way, that shown by an uncle of the Plate winner, Mr. Joseph Stratton, who put the pure Shorthorn on to a mixed Brittany-and-Jersey cow with a very successful result. It was one of the very pets of the week. Mr. Linkwood Brown's big blue ox, the best of this same cross-bred class, was at one

time rather fancied for the finish; and from the same stalls came a Shorthorn and Highland "nick," very happily blended, which was assumed to be the second-best cow in the Hall; so that all the honours in this way went due North.

At Oakham the Keythorpe Leicesters beat Mr. Byron's Lincoln, as many maintain they should have done at Islington; but never was the Champion sheep plate so open a race. There were good judges who would have given this to Lord Chesham's capital pen of Shropshires, even if they were not quite sorry; there were a few who preferred Mr. Morrison's really good-looking Hampshires, so far in front of their own class, where the Kent-Hampshires were miserable seconds; while the shortwool bench had out Sir Robert Throckmorton's light-weight Southdowns, but two very mealy faces ruined their appearance, and so Mr. Turner and his fellows had to depend on the good backs and trim frames of Mr. Rigden's best pen, though with a sour-headed sheep amongst them. Still here, too, there was for some time a dead-lock between the two sets of judges, until ultimately Mr. Little "went over," and the fine fleeces of the Lincoln for once carried the day. It was, however, not by any means a strong entry of Southdowns, the Duke of Richmond winning in the old class with a pen of very plain sheep; and putting public opinion against that of the judges, we believe that Lady Berners' beautiful Leicesters should have been the champion sheep of the show. However, Mr. Lynn and his fellows had settled their fate before it came to a division, although a decision might have been sooner arrived at had the Leicesters been left in. As we said last week, the show of some breeds of sheep was very limited, as without "going to book" we should say the Cotswolds, the Lincoln, the Shropshires, the Oxford, and the crosses were all numerically below the average of the last few years, as the crosses were also in merit. And yet a few days before the opening, rumour, assuming a semi-official tone, spoke out as usual about the show being in almost every way larger than ever.

The £100 Champion Plate has been won year by year since its establishment by a Shorthorn, while the silver cup for the best pen of pigs in the Hall has now gone for four shows in succession to blacks. The judges had, indeed, a very poor opinion of the whites generally; and though they threw in a commendation here and there, or more properly but *two* commendations in *three* classes, they generally commended the three classes of "other breeds," or, in point of fact, Berkshires, where the three first prizes were taken by Mr. Biggs, who had already shown the strength of his hand at Birmingham; but the competition here was stronger, as evinced by the displacement of Lord Ailesbury's and Mr. Bailey's good pigs. It was, in fact, all through a capital show of Berkshires, led off by some of the most useful farmers' pigs ever exhibited. The smaller black pigs, apparently crossed and re-crossed and "improved" out of any especial breed, also made up a very excellent although limited exhibition, and the white "fancy" will clearly have to look to its colours, or these will go fast out of fashion. There is plenty of room for the Yorkshiremen to make an impression at Islington.

May we protest against the abominable way in which the catalogue is brought out, with sheet advertisements under the pretence of plans of the place, stitched in here and there throughout, an annoyance and an impediment only to be got over by straightway tearing out not so much this superfluous as ill-disposed matter? We are glad to see that Mr. Leeds, the new chairman of the Hall Company, has had the good taste to order his own name and that of the Hall secretary to be struck off the title page of the catalogue, where, as we have said before now, such titles

had no more right to appear than on the catalogue of the Royal Academy. Let the Agricultural Hall Company advertise itself and its officers by all means in the proper place; but if, as we take it, the Council of the Smithfield Club has some control over the arrangement of its own material, might we ask why every page of this work is introduced and disfigured by a flash bill-sticker's notice, about the Islington Horse Show? Is it to be inferred that the Council is desirous of having it understood that these two exhibitions are joint concerns? If they are not, the appearance of such advertisement in such a place is simply an impertinence. The Club might as consistently head and tail every page of the catalogue with Hengler's Circus, or any other mountebank performance in preparation at the Agricultural Hall.

J U D G E S .

CATTLE.

DEVONS, HEREFORDS, SUSSEX OR SUFFOLK POLLED, AND LONG HORNS.

Keary, H. W., Bridgnorth;
Snythies, G., Marlow, Leintwardine;
Pope, T., Horningham, Warrminster, Wilts.

SHORTHORNS, SCOTCH, IRISH, WELSH CROSS, OR MIXED.
Savidge, M., Sarsden Lodge Farm, Chipping Norton;
Tom, W., Aylesby Manor, Grimsby;
Ruddock, T. W., Tweed House, Berwick-on-Tweed.

SHEEP.

LEICESTERS, COTSWOLDS, KENTISH OR ROMNEY MARSH, CROSS-BRED LONG WOOLS, OXFORD, MOUNTAIN, CROSS-BRED LONG AND SHORT WOOLS, LINCOLNS.

Mann, J. W., Spaldwick, Kimbolton, Hunts;
Bryan, J., Southleigh, Witney, Oxon;
Lynn, J., Church Farm, Stroxtou, Grantham.

SOUTH-DOWNS, HAMPSHIRE, OR WILTSHIRE DOWNS, SHROPSHIRE, RYELAND, CHEVIOT AND DORSET.
Turner, J. S., Chyngton, Seaford Sussex;
Horley, T., The Fosse, Leamington;
Little, E., Lamhill, Chippenham.

PIGS.

Angus, J., Whitefield, Morpeth;
Fisher, J., Wood House, Cross Hills, Yorks;
Smith, J., Henley-in-Arden.

CATTLE.

[In the Entries thus distinguished (*) the Exhibitor also took a Silver Medal as the breeder.]

DEVONS.

Steers, not exceeding 2 years and 6 months old.
First prize of £20, Her Majesty the Queen, Prince Consort's Norfolk Farm, Windsor.*
Second of £15, T. L. Senior, Broughton, Aylesbury.
Third of £10, H.R.H. the Prince of Wales, Sandringham.

Steers, not exceeding 3 years and 3 months old.
First prize of £30, W. Smith, Hoopern, Exeter.
Second of £20, J. Ford, Rushton, Blandford.
Third of £10, W. Farthing, Stowey, Bridgewater.
Commended.—H.R.H. the Prince of Wales.
Steers or Oxen, above 3 years and 3 months old.
First prize of £30, T. Bond, Park, Bridgewater, Somerset.*
Second of £20, J. Overman, Burnham Sutton, Norfolk.
Third of £10, W. Taylor, Glynley, Eastbourne, Sussex.
Highly commended.—Her Majesty the Queen; W. Smith, Hoopern; and J. H. Buller.

Class commended.

Heifers, not exceeding 4 years old.

First prize of £25, T. L. Senior.
Second of £15, S. R. Jefferys, Maiden Bradley, Wilts.
Third of £10, J. T. Senior, Broughton, Aylesbury.
Commended.—H.R.H. the Prince of Wales; J. Coate, Hammoon, Dorset; J. H. Buller; and J. Ford.

Cows, above 4 years old.

First prize of £25, J. Davy, Flitton Barton, North Molton.*
Second of £15, W. Smith, Hoopern.
Third of £10, J. H. Buller, Downes, Crediton.
Highly commended.—S. R. Jefferys.
Commended.—H. Hitchcock, George-Nympton, South Molton.

HEREFORDS.

Steers, not exceeding 2 years and 6 months old.

First prize of £20, J. Baldwin, Luddington, Warwick.*
Second of £15, A. Pike, Mitton, Tewkesbury.

Steers, not exceeding 3 years and 3 months old.

First prize of £30, W. Groves, Brompton, Shrewsbury.
Second of £20, R. Wortley, Sutfield, Norfolk.
Third of £10, C. Hall, Brickwood, Croydon.

Steers or Oxen, above 3 years and 3 months old.

First prize of £30, W. Heath, Ludham Hall, Norwich.
Second of £20, L. Loyd, Addington, Surrey.
Third of £10, J. Ford, Rushton.
Highly commended.—Earl Daruley, Cobham Hall, Gravesend; Dowager Countess Cowper, Silsoe, Amptill, Beds; H. Bettridge, East Hanney, Berks.

Class commended.

Heifers, not exceeding 4 years old.

First prize of £25, Her Majesty the Queen.
Second of £15, J. D. Allen, Tisbury, Wilts.

Cows, above 4 years old.

First prize of £25, R. Wortley, Sutfield, Aylsham, Norfolk.
Second of £15, H. Bettridge, East Hanney, Wantage.
Third of £10, W. Groves, Brompton, Shrewsbury.
Highly commended.—W. Heath.

SHORTHORNS.

Steers, not exceeding 2 years and 6 months old.

First prize of £25, Lieut.-Col. Lindsay, V.C., M.P., Lockinge, Wantage.*

Second of £15, F. J. S. Foljambe, M.P., Broughton, Osberton, Worksop, Notts.

Third of £10, J. J. Sharp, Kettering.

Steers, not exceeding 3 years and 3 months old.

First prize of £30, R. Bruce, Newton of Struthers, Forres, Moray.*

Second of £20, Lieut.-Col. Lindsay, V.C., M.P.

Third of £10, F. J. S. Foljambe, M.P.

Steers or Oxen, above 3 years and 3 months old.

First prize of £30, J. Stratton, Alton Priors, Marlborough.

Second of £20, W. Farthing, Stowey Court, Bridgewater.

Third of £10, W. Sissman, Buckworth, Kimbolton.

Commended.—Lieut.-Col. J. Reeve, Lendenham, Grafton; and T. Mace, Sherborn.

Heifers, not exceeding 4 years old.

First prize of £25, The Rev. B. B. Kennard, Marulhull Rectory, Blandford.*

Second of £15, Sir W. Booth, Bart., Paxton Park, St. Neots.

Third of £10, W. How, Tottington, Thetford, Norfolk.
Highly commended.—Rev. W. Sneyd, Keele Hall, Newcastle-under-Lyne.

Cows, above 4 years old.

First prize of £25, Sir W. C. Trevelyan, Bart., Wallington, Newcastle-upon-Tyne.*

Second of £15, Lient-Col. Lindsay, V.C., M.P.
Third of £10, J. W. Kirkham, Cadeby, Grimsby,
Lincoln.

SUSSEX.

Steers, not exceeding 3 years old.

First prize of £20, Lee Steere, M.P., Jayes, Dorking.*
Second of £10, G. C. Carew, Gibson, Sandgate, Sussex.
Third of £5, G. C. Coote, Tortington, Sussex.

Steers or Oxen, above 3 years old.

First prize of £25, M. Coote, Climping, Sussex.
Second of £15, J. M. Montefiore, Worth, Crawley.
Third of £10, J. Neale, Coldwatham, Sussex.
Highly commended.—J. Shoosmith, Berwick, Lewes,
Sussex.

Commended.—F. Gates, Steyning, Sussex.

Heifers, not exceeding 4 years old.

First prize of £20, T. Smith, Knelle, Beckley, Ashford.*
Second of £15, Lee Steere, M.P.
Commended.—W. Neale, Hardham, Sussex; L. Huth,
Possingworth, Sussex.

Cows, above 4 years old.

First prize of £20, Right Hon. H. Brand, M.P., Glynd,
Lewes.*

Second of £15, J. Shoosmith, Berwick, Lewes.

Highly commended.—G. C. Coote, Tortington, Sussex.
Class commended.

NORFOLK OR SUFFOLK POLLED.

Steers or Oxen, of any age.

First prize of £15, J. J. Colman, M.P., Carrow House,
Norwich.

Second of £10, W. Durrant, Stalham, Norfolk.

Heifers or Cows, of any age.

First prize of £15, J. J. Colman, M.P.

Second of £10, J. S. Postle, Smallburgh Hall, Nor-
wich,

Commended.—W. Slipper, Catfield, Stalham, Norfolk.
LONG-HORNS.

Steers or Oxen, of any age.

The prize of £10, Sir J. H. Crew, Bart., Calke Abbey,
Derby.*

Commended.—W. T. Cox.

Heifers or Cows, of any age.

The prize of £10, W. T. Cox, Spouidon Hall, Derby.*

SCOTCH WEST HIGHLAND.

Steers or Oxen, of any age.

First prize of £30, J. G. Leigh, The Hoe, Luton.

Second of £15, W. McCombie, M.P., Tillyfour, Aber-
deen, N.B.

Commended.—J. Tingey, Ellingham, Attleborough.

Heifers or Cows, of any age.

First prize of £15, Sir W. C. Trevelyan, Bart., Wall-
lington, Newcastle-on-Tyne.

OTHER SCOTCH-HORNED.

Steers or Oxen, of any age.

The prize of £10, G. and J. G. Smith, Ballindalloch,
Banff.*

Commended.—R. Wortley, Suffield.

Heifers or Cows, of any age.

[Not sufficient merit.]

SCOTCH-POLLED.

Steers or Oxen, of any age.

First prize of £30, J. S. Postle, Smallburgh Hall, Nor-
wich.

Second of £15, J. Stephen, Conglass, Inverurie, Aber-
deen.

Commended.—W. Scott, Huntley.

Heifers, not exceeding 4 years old.

First prize of £15, J. Bruce, Fochabers, Elgin,

Second of £10, W. Brown, Linkwood, Elgin, Moray.

Cows, above 4 years old.

The prize of £15, W. McCombie, M.P.*

IRISH.

Steers or Oxen, of any age.

The prize of £10, R. Wortley, Suffield.

Heifers or Cows, of any age.

[No entry.]

WELSH.

Steers or Oxen (Runts), of any age.

First prize of £20, J. E. Parry, Glynn Hall, Harlech,
Merioneth.*

Heifers or Cows, of any age.

[No Entry.]

CROSS OR MIXED BRED.

Steers, not exceeding 3 years old.

First prize of £25, J. and W. Martin, Aberdeen.

Second of £15, W. Slatter, Stratton, Cirencester.

Third of £10, The Hon. M. H. Moreton, Newton of
Struthers, Forres, Moray.

Commended.—J. D. Allen and W. Scott.

Steers or Oxen, above 3 years old.

First prize of £25, W. Brown, Linkwood.*

Second of £15, J. Overman, Burnham Sutton, Norfolk.

Highly commended.—Sir W. C. Trevelyan, Bart.,
Wallington, Newcastle-on-Tyne; J. Stratton, Manning-
ford Bruce, Marlborough, Wilts.

Commended.—R. Skelton, sen., Gabriel's Park, Eden-
bridge, Kent.

Heifers, not exceeding 4 years old.

First prize of £20, W. Brown, Linkwood.*

Second of £10, S. Goulter, Woodbastwick, Norfolk.

S H E E P.

LEICESTERS.

Fat Wethers, 1 year old (under 23 months).

First prize of £20, Executors of the late Lord Berners,
Keythorpe Hall, Leicester.*

Second of £15, Col. Lowther, M.P., Barleythorpe,
Oakham.

Third of £5, W. Brown, Highgate, Holme-on-Spalding-
Moor.

Fat Wethers, 1 year old (under 23 months).

Each Sheep not to exceed 220 lbs. live weight.

First prize of £20, Executors of the late Lord Berners.*

Second of £15, W. Brown, Highgate.

Third of £5, Col. Lowther, M.P.

Fat Ewes, above 3 years old (that must have had a Lamb).

The prize of £10, Col. Lowther, M.P.*

COTSWOLDS.

Fat Wethers, 1 year old (under 23 months.)

First prize of £20, J. Wheeler & Sons, Long Compton.*

Second of £15, R. Hall, Deddington, Bartford.

Fat Ewes, above 3 years old (that must have had a Lamb).

The prize of £10, Executors of the late T. Gillett, Kil-
kenny, Farringdon.*

LINCOLNS.

Fat wethers, 1 year old (under 23 months).

First prize of £20, J. Byron, Kirkby Green, Sleaford,
Lincoln.*

Second of £15, J. Pears, Mere, Lincoln.

Third of £5, T. Guannel, Willow, Milton, Cambridge.

Fat Ewes, above 3 years old (that must have had a Lamb.)

The prize of £10, J. Byron, Kirkby.

KENTISH OR ROMNEY MARSH.

Fat Wethers, 1 year old (under 23 months).

First prize of £15, B. W. Tassell, Hode, Canterbury,
Kent.*

Second of £10, W. Burch, Rhode Court, Selling,
Kent.

CROSS-BRED LONGWOOLS.

Fat Wethers, 1 year old (under 23 months).
First prize of £15, Sir W. de Capell Brooke, Bart.,
Geddington, Kettering.*

SOUTHDOWNS.

Fat Wethers, 1 year old (under 23 months).
First prize of £20, W. Rigden, Hove, Sussex.*
Second of £10, H. H. Penfold, Selsey, Chichester.
Third of £5, Lord Sondes, Elham, Thetford.
Highly commended.—F. J. S. Foljambe, M.P.
Commended.—H. Humphrey, Ashington, Sussex.
Fat Wethers, 1 year old (under 23 months).
Each Sheep not to exceed 200lbs. live weight.
First prize of £15, Sir W. Throekmorton, Bart., Buck-
land, Farringdon, Berks.*
Second of £10, W. Rigden.
Third of £5, H. H. Penfold.
Highly commended.—Duke of Richmond, Goodwood,
Sussex.

Fat Wethers, 2 years old (above 23 and under 35 months).
First prize of £15, Duke of Richmond.*
Second of £10, J. Overman, Burnham Sutton, Norfolk.
Highly commended.—F. J. S. Foljambe, M.P.
Fat Ewes, 3 years old (that must have had a Lamb).
The prize of £10, H. D. Barclay, Eastwick, Leather-
head.

Commended.—Lord Sondes.

HAMPSHIRE OR WILTSHIRE DOWNS.

Fat Wethers, 1 year old (under 23 months).
First prize of £20, A. Morrison, Fonthill, Tisbury,
Wilts.*
Second of £15, J. Russell, Sutton-at-Hove, Dartford.
Third of £5, J. and M. Arnold, Westmeon, Petersfield.
Commended.—R. and J. Russell, Horton Kirby, Dart-
ford.
Fat Ewes, above 3 years old (that must have had a Lamb).
The prize of £10, J. Rawlence, Bulbridge, Salisbury.*
Commended.—J. Barton, Basingstoke, Hants.

SHROPSHIRES.

Fat Wethers, 1 year old (under 23 months).
First prize of £20, Lord Chesham, Latimer, Bucks.*
Second of £10, S. Beach, The Hattons, Brewood,
Stafford.
Third of £5, Lord Wenlock, Eserick Park, York.
Highly commended.—T. Noek, Sutton Maddock,
Shropshire.
Commended.—G. Cooke, Linton, Cambridge.
Fat Wethers, 2 years old (above 23 and under 35 months).
First prize of £15, Lord Chesham.*
Second of £5, Lord Wenlock.
Fat Ewes, above 3 years old (that must have had a Lamb).
The Prize of £10, Lord Chesham.*

OXFORDSHIRES.

Fat Wethers, 1 year old (under 23 months).
First prize of £20, Duke of Marlborough, K.G., Blen-
heim, Woodstock.*
Second of £15, N. Stilgoe, Adderbury, Oxford.
Third of £5, S. Druce, Eyusham, Oxford.
Highly commended.—Z. Stilgoe, Adderbury.
Fat Wethers, 2 years old (above 23 and under 35 months).
[No entry.]
Fat Ewes, above 3 years old (that must have had a Lamb).
The prize of £10, Duke of Marlborough.*

RYELANDS, CHEVIOTS, AND DORSETS.

Fat Wethers, or any other pure breed, not specified in any
of the foregoing divisions, of any age.
First prize of £15, H. Farthing, Nether Stowey,
Bridgwater.*

Second of £10, J. B. Downing, Holme Lacy, Hereford.
Third of £5, J. McGill, Dumfries.

MOUNTAINS (NOT BEING CHEVIOTS).

Fat Wethers, of any White-faced Mountain breed,
of any age.
First prize of £15, J. Tapp, Twitchea, South Molton,
Devon.*
Second of £10, W. Smith, Hoopern.
Fat Wethers, of any Black-faced or Speckled-faced
Mountain breed, of any age.
First prize of £15, Duke of Roxburgh, Floors, Kelso.*
Second of £10, T. Roy, Tullylumb, Perth.

CROSS-BRED LONG AND SHORT-WOOLS.

Fat Wethers, 1 year old (under 23 months).
First prize of £20, J. Overman, Burnham Sutton.*
Second of £15, N. Stilgoe, Adderbury.
Third of £5, H. A. Brassey, M.P., Preston, Ayleford,
Kent.
Highly commended.—G. Hine, Oakley, Beds.
Commended.—Colonel Lowther, M.P.

P I G S.

WHITE BREEDS.

Not exceeding 9 months old.
First prize of £10, her Majesty the Queen.*
Second of £5, Capt. R. P. Warren, Basingstoke, Hants.
Commended.—T. L. M. Cartwright.
Above 9 and not exceeding 12 months old.
First prize of £10, J. and F. Howard, Britannia Farms,
Bedford.*
Second of £5, Her Majesty the Queen.
Above 12 and not exceeding 18 months old.
First prize of £10, W. H. Dunn, Standon Manor, Hun-
gerford.*
Second of £5, R. and E. Duckering & Son, Northorpe,
Kirton Lindsey.
Commended.—H.R.H. The Prince of Wales.

BLACK BREEDS.

Not exceeding 9 months old.
First prize of £10, T. Chamberlayne, Cranbury Park,
Winchester.*
Second of £5, C. McNiven, Perrysfield, Surrey.
Highly commended.—J. Coate, Hammoon, Blandford,
Dorset.
Pigs, of any breed, above 9 and not exceeding
12 months old.
First prize of £10, J. Coate, Hammoon.*
Second of £5, N. Benjafield, Shorts Green, Motcombe,
Dorset.
Highly commended.—A. Benjafield, Stalbridge, Dorset.
Pigs, of any breed, above 12 and not exceeding
18 months old.
First prize of £10, T. Chamberlayne.*
Second of £5, A. Benjafield.
Highly commended.—J. Coate, Lord Aylesford, and
H. S. Sturt, M.P.

OTHER BREEDS.

Pigs, of any other breed, not exceeding 9 months old.
First prize of £10, J. Biggs, Cublington, Leighton
Buzzard, Beds.*
Second of £5, J. Roberson, Bayfordbury, Herts.
Highly commended.—The Rev. H. G. Bailey, Swin-
don, Wilts.
Class commended.
Pigs, of any other breed, above 9 and not exceeding
12 months old.
First prize of £10, J. Biggs, Cublington.*

Second of £5, The Marquis of Ailesbury, Savernake, Marlborough, Wilts.

Highly commended.—S. Druce, Eynsham, Oxford.

Commended.—J. Treadwell, Upper Winchendon, Bucks.

Pigs, of any other breed, above 12 and not exceeding 18 months old.

First prize of £10, J. Biggs, Cublington.*

Second of £5, Marquis of Aylesbury.

Highly commended.—J. H. Clarke.

Class commended.

EXTRA STOCK.

Best Steer or Ox.—£10 and Silver Medal, J. Bruce, Inverquhorney, Longside, Aberdeen.

Best Heifer or Cow.—£10 and Silver Medal, R. H. Harris, Earnhill, Forbes, Moray.

Best Wether Sheep of the Leicester, Cotswold, Lincoln, and Kentish, or other long-wool breed.—Silver Cup, value £5, J. Pears, Mere, Lincoln.

Best Wether Sheep of the South-down, and Hampshire or Wiltshire-down breed.—Silver Cup, value £5, A. Morrison, Fonthill House, Tisbury, Wilts.

Best Wether Sheep of the Shropshire, Oxfordshire, Cross-bred, or any other breed not specified above.—Silver Cup, value £5, S. Beach, The Hattons Brewod.

Best single Pig.—Silver Cup, value £5, T. Chamberlayne.

COMMENDATIONS IN EXTRA STOCK.

Highly commended.—The Executors of Lord Berners; W. Rigden; Sir W. Throckmorton; J. Overman; and R. E. Duckering and Son.

Commended.—R. Jardine, M.P.; Lord Penryhn; J. G. Leigh; J. J. Colman, M.P.; R. Hall; the Duke of Richmond; and N. Stilgoe.

SILVER CUPS.

For the best Steer or Ox in any of the Classes.—Silver Cup, value £40, to the Exhibitor, J. Stratton, Alton Priors, Marlborough. Gold Medal to Breeder, the late R. Stratton.

For the best Heifer or Cow in any of the Classes.—Silver Cup, value £40, to J. Bruce, Fochabers, Elgin. Gold Medal to A. Pattison.

For the best pen of Leicesters, Cotswolds, Lincolns, Kentish, or other long-woolled breed, in any of the Classes.—Silver Cup, value £20, to J. Byron, Kirkby Green, Sleaford, Lincoln.

For the best pen of one-year-old Southdowns, Hampshire, or Wiltshire Downs.—Silver Cup, value £20, to W. Rigden, Hove, Brighton.

For the best pen of one-year-old Shropshire, Oxfordshire, Cross-bred, or any other breed of Sheep (not specified in Prize List), in any of the Classes.—Silver Cup, value £20, to Lord Chesham, Latimer, Chesham, Bucks.

For the best pen of Pigs in any of the Classes.—Silver Cup, value £20, to J. Biggs, Cublington, Leighton Buzzard, Beds.

CHAMPION PLATE.

For the best Beast in the Show (Extra Stock included).—A Piece of Plate value £100, J. Stratton, Alton Priors, Marlborough.

For the best pen of Sheep in the Show.—A Piece of Plate value £50, J. Byron, Sleaford, Lincolnshire.

LIVE WEIGHTS OF CATTLE AND SHEEP.

[The Numbers omitted are those of animals which were not exhibited. The numbers marked thus (*) are winners of first prizes. The best beast in the yard is the Shorthorn Ox, 101; the best Cow or Heifer, the Black Polled, 188; and the best pen of Sheep, the Lincolns, 252. The best of all the Southdowns, or other Downs, is pen 271; and the best of the Shropshires, Oxfords, and Cross-breds, pen 336.]

CATTLE.

DEVONS.			Cows.		
No.	STEERS, 2½ years.	WEIGHT.	No.	WEIGHT.	
	wt. qrs. lbs.	qrs. lbs.		qrs. lbs.	
1	10	1 2	76	17	0 0
2	13	2 11	78	17	2 4
*3	10	1 16	80	14	2 20
4	11	1 4	*82	17	2 24
5	11	1 18	83	17	0 20
7	11	0 2	SHORTHORNS.		
STEERS, 3 years 3 months.			STEERS, 2 years 6 months.		
9	13	3 20	84	16	3 2
10	13	3 25	86	15	3 2
12	11	3 3	87	16	2 10
13	12	3 12	88	15	1 16
17	14	6 2	89	15	1 25
OXEN.			*90	17	1 22
18	17	1 14	91	15	2 16
20	15	1 17	STEERS, 3 years 3 months.		
*21	17	1 16	95	17	1 8
23	15	2 10	96	18	3 3
25	15	2 10	*97	17	0 8
27	16	0 9	OXEN.		
28	18	1 20	98	25	1 16
HEIFERS.			99	21	2 6
30	12	3 22	100	18	3 20
32	15	1 23	*101	22	1 26
33	12	2 13	103	20	1 9
34	15	0 10	104	23	3 16
35	15	0 14	105	19	1 21
*36	16	0 9	106	19	3 14
37	13	0 22	HEIFERS.		
38	12	2 6	*107	17	3 18
Cows.			108	18	3 2
*39	14	0 8	109	15	2 12
41	14	0 0	110	14	1 18
42	11	2 4	112	19	0 15
43	11	2 4	114	16	0 12
44	12	0 5	115	13	1 10
45	14	0 24	117	18	0 17
HEREFORDS.			Cows.		
STEERS, 2½ years.			*118	19	3 0
47	15	2 22	119	17	1 4
*49	13	1 26	120	17	3 20
STEERS, 3 years 3 months.			122	17	3 18
*52	17	0 14	123	17	2 22
54	16	0 16	SUSSEX.		
57	16	1 26	3 years.		
OXEN.			126	15	3 20
58	18	3 2	130	18	0 17
*60	20	2 25	131	17	0 4
62	17	1 16	*133	16	0 22
63	18	0 20	OXEN.		
67	19	1 16	135	16	3 0
68	21	0 18	137	20	0 20
69	17	3 8	138	15	3 18
70	19	1 0	139	16	2 24
HEIFERS.			*140	20	2 26
*71	15	1 0	141	20	2 4
75	13	2 7	142	18	2 7

SUSSEX. (Continued.)			SCOTCH POLLS (Continued.)			KENTS.			EXTRA.-SHORTWOOLS (Continued.)		
No.	WEIGHT.		No.	WEIGHT.		No.	WEIGHT.		No.	WEIGHT.	
	cwt.	qrs. lbs.		cwt.	qrs. lbs.		cwt.	qrs. lbs.		cwt.	qrs. lbs.
HEIFERS.			HEIFERS.			CROSSES.			SHROPSHIRE.		
143	15	3 4	*188	18	2 5	256	6	2 6	323	1	3 26
*144	13	1 2	189	18	0 24	257	6	2 27	324	1	3 15
145	16	1 22	Cows.			258	7	0 2	325	2	0 15
146	16	0 22	*191	17	0 18	*260	7	0 23	326	1	3 21
Cows.			192	15	2 10	261	6	2 27	327	2	0 0
147	16	0 3	I R I S H.			262	5	2 8	328	2	1 11
148	17	0 12	Any age.			EXTRA.-LONGWOOLS.			329	2	0 15
149	16	0 0	*193	17	0 12	263	2	0 11	330	1	3 18
*150	15	1 18	194	20	0 14	264	1	3 24	331	1	3 13
153	15	0 10	WELSH OX.			265	2	1 0	SHROPSHIRE.		
NORFOLK or SUFFOLK.			*195	19	1 20	266	2	2 8	332	5	3 10
All ages.			CROSSES.			267	2	1 8	333	6	3 5
154	16	0 10	3 years' STEERS.			268	2	0 15	334	6	3 19
155	15	0 8	196	16	1 19	*269	3	1 9	*336	5	3 22
*156	20	2 13	197	15	0 20	SOUTHDOWNS.			337	6	1 9
HEIFERS or Cows.			*198	16	3 6	270	5	2 8	338	5	2 15
159	15	0 4	199	16	2 6	*271	5	2 4	340	6	1 10
160	14	1 18	200	21	0 0	272	5	3 0	OLD SHEEP.		
*161	15	0 26	201	15	0 2	273	5	3 14	341	7	0 17
LONG HORNS.			202	17	3 0	274	6	0 20	342	6	1 3
All ages.			OXEN.			275	6	1 2	*343	9	1 25
162	18	0 0	203	21	3 17	276	6	0 20	EWES.		
*163	20	0 0	205	16	3 5	277	6	0 8	*344	6	1 26
Cow.			206	19	3 17	279	5	1 16	OXFORDS.		
*164	15	3 16	207	18	0 18	280	6	1 15	345	6	1 12
WEST HIGHLANDERS.			*208	24	3 6	LIGHT WEIGHTS.			*346	7	1 13
Any age.			211	13	0 15	282	5	0 12	347	7	0 17
166	16	1 1	212	18	0 27	283	4	3 27	348	7	1 20
*167	19	3 4	214	15	2 24	284	4	2 16	EWES.		
169	17	1 22	215	21	3 14	285	4	2 22	349	7	3 9
170	17	3 0	217	18	1 0	286	5	0 0	RYELAND, CHEVIOT,		
171	15	0 7	HEIFERS.			*287	5	0 2	and DORSET.		
173	14	1 17	*219	17	3 20	288	5	0 5	350	6	0 18
174	17	1 4	220	15	3 14	290	5	1 22	*351	6	2 13
Cow.			221	16	3 26	OLD SHEEP.			352	3	3 15
*175	13	1 25	EXTRA STOCK.			*292	6	3 9	354	6	1 25
OTHER			OXEN.			293	6	0 27	EXMOORS.		
SCOTCH HORNS.			222	18	0 10	294	5	3 23	355	4	3
Any age.			224	18	0 8	295	6	1 13	*356	5	3 22
176	9	1 26	*225	23	2 13	296	6	3 6	BLACKFACED.		
177	16	0 3	226	17	3 22	297	6	2 14	357	5	1 16
178	15	0 20	227	16	3 3	EWES.			358	5	2 8
*179	20	0 23	228	19	1 0	*298	5	1 23	359	4	2 13
HEIFER.			229	19	1 4	300	5	3 1	360	5	1 1
180	11	2 11	Cows or HEIFERS.			301	5	1 18	*361	4	2 16
SCOTCH POLLS.			230	18	2 20	303	5	1 9	CROSSES.		
Any age.			*232	13	0 0	HAMPSHIRE or			362	5	3 18
*181	15	3 10	233	22	1 8	WILTSHIRE.			363	5	1 20
182	18	3 15	236	14	0 8	304	7	0 23	364	6	0 12
183	19	1 6	COTSWOLDS.			305	6	3 24	*365	6	3 16
184	21	0 23	248	7	2 21	*306	6	3 5	366	7	0 25
186	18	2 2	*249	7	2 19	307	6	1 4	367	6	1 7
S H E E P.			EWES.			308	6	3 27	EXTRA.		
LEICESTERS.			251	7	3 1	309	7	0 2	370	2	0 14
237	6	0 10	LINCOLNS.			EWES.			371	1	3 14
239	5	3 20	*252	8	1 4	312	6	0 4	372	1	2 8
*240	6	1 9	253	7	1 16	313	6	3 22	373	2	1 27
LIGHT WEIGHTS.			254	7	0 17	*314	7	0 11	*374	2	0 21
241	5	2 4	EWES.			315	6	3 4	375	1	3 6
242	4	3 18	255	9	1 2	316	7	0 8	377	1	3 1
243	5	2 3	EXTRA.-SHORTWOOLS.			317	2	0 0	379	2	0 20
*244	5	2 12	EWES.			318	1	3 1	380	1	3 1
245	6	1 13	LINCOLNS.			319	2	1 27	381	2	0 16
246	6	0 11	EWES.			320	2	1 9	382	2	3 13
*247	6	2 21	EXTRA.-SHORTWOOLS.			*321	2	2 1	383	2	0 20
						322	1	2 24	384	2	1 0
									384A	2	1 7

THE IMPLEMENT DEPARTMENT.

If, as was recently shown in our columns, the annual value of the live stock of the United Kingdom is about 75 millions, the tillage-crops, grain, roots, grass, flax, &c., rank far higher in value, reaching to nearly three times that amount; hence the implements and appliances required on the farm, and the samples of seeds and roots shown, have a special interest both for producers and consumers. Every year some improvement is made in existing implements, machinery, and vehicles for transport; therefore a tour of the implement galleries, to see what novelties or improvements there are, whether prices have gone up, or what reduction competition has led to, becomes essentially necessary to large classes of the community.

Here congregate not only metropolitan visitors, many of whom perhaps scarcely know the use of a plough or harrow, or the purposes for which a cake-breaker is required; but here also through the practical men, who expend large amounts on the best improved tillage or harvesting implements; and here also come the foreign and colonial agriculturists who are following steadily in the track of that science combined with practice, which the old Royal has so long and so steadily promoted by its annual shows. True, the limited area of the Agricultural Hall affords scant space for the ambitious implement and machine makers, many of whom could cover readily the whole arena with specimens of their handiwork, but cabined, cribbed, confined within a few yards of space they are obliged to be content to show but one or two of their best and most approved machines or engines, so as to keep their names before the agricultural world, and have at least the chance of booking orders. It is remarkable how year by year the agricultural machinery and implement trade has grown, until in this business there have arisen giants in the land, whose works are veritable towns and whose implements are found in use in every country of the habitable globe where agriculture and its collateral branches are carried on. Not only have limited liability companies been formed to carry on many of these great undertakings, but some are obliged to disencumber themselves of minor affairs by handing the manufacture of these over to smaller firms, so as to confine themselves to big things—steam engines and steam ploughs, and all the other great appliances of steam to cultivation, forming now an enormous portion of the machinery and implement trade. Only those who look into the figures even of our export trade can have a conception of the magnitude to which the business of the agricultural engineer has grown.

There are just upon 2,000 factories in the United Kingdom employed in the construction of machinery, about which 167,000 hands are engaged, and those occupied with agricultural machinery and implements form a very large portion of the number. To say nothing of the large amount of implements and machinery now in use at home for the 46 million of acres under all kinds of crops, bare, fallow, and grass, the value of which it is difficult to estimate even on the farm, we know that the quantity sent abroad is getting larger year by year. The value of the machinery of all kinds exported in the past three years has averaged 3½ millions, and that of the steam engines about two millions more, whilst the special agricultural implements make up another quarter of a million.

After these few preliminary remarks, we proceed to the business of the Show, and mark with satisfaction in the first place that the Council has made a clean sweep from the hall and galleries of all articles not properly of agricultural utility, banishing all such outsiders to the arcade and the concert hall. Indeed, so restrictive has the line been drawn

at last that many exhibitors complain of the exclusion of legitimate articles. However, we think it far better to err on the right side in determining what shall not be admitted, as there is thus the more room afforded in the body and gallery of the hall for engines and implements purely agricultural. Having made as careful a survey of each individual stand as the crowded condition of the hall would admit, we are now prepared to give a brief notice of what was really shown, preferring this to the preliminary notices sent us by exhibitors, many of their exhibits being often left out for want of space or other cause. It was evident from the way orders were being booked in all directions, and cheques passed, that a good general business was done on all sides. This is not the time to criticise or comment upon the respective merits of the implements shown, which have been tested during the season just ended, and we must be content in most cases to give a mere enumeration of the specialities of each manufacturer.

Amies, Barford and Co., Peterborough; specimens of their prize apparatus for steaming food; several oilcake and corn-grinding mills, patent steam-ploughs and a model of Campain's anchor for steam cultivation; and a model of an elevator.

Ashby, Jeffery and Luke, Stamford, a fine collection of chaff cutters, with covered cog-wheels; a vertical engine on high wrought-iron road wheels, a strong self-moving traction engine adapted for the Fiskeu ploughing tackle, and some of their well known horse-rakes and hay-makers.

Aveling and Porter, Rochester, an 8-horse power agricultural locomotive, a 12-horse steam-plough, and a 20-ton steam road-roller. The excellence of these engines, &c., are too well known to need comment.

John Baker, of Wisbeach, one of his blowing, winnowing, and screening machines.

Thomas Baker, Compton, some liquid manure and water carts.

George Ball, North Kilworth, near Rugby, carts and waggons, chaff-cutters and horse gear.

Thomas Ball, Northampton, a potato-plough, improved criterion double-furrow plough, and a reaping machine.

W. Ball and Son, Rothwell, a good collection of prize waggons, carts, double and single furrow ploughs, harrows, and iron seuffers or scarifiers.

A. C. Bamlett, Thirsk, several of his mowers and reapers, including his new self-raker, in which the position of the corn side wheel enables it to be easily turned at the corners of the field, and his combined mower and reaper, with an arrangement by which the speed of the knife can be instantly reduced or increased.

Barrows and Stewart, Banbury, a combined thrashing and finishing machine with a 4ft. 6in. drum, and a portable 6-horse steam engine; the steam-jacketed cylinder being placed on the smoke-box end of the boiler greatly economizes fuel. The Oxfordshire wrought iron cattle crib and swing water-barrow were also shown.

E. H. Bentall, Maldon, varieties of his well-known chaff cutters, oil-cake mills, turnip cutters and pulpers; Gardner's cutter, the only one that did not choke in the Oxford trials.

Beverley Iron and Waggon Company (Limited) had on their stand some grass mowers, two 1-horse reapers, a double self-acting swathe delivery reaper, a cattle cart with shafts to attach to either end, an improved liquid manure distributor, some market carts, clod crushers and rollers.

Robert Boby, Bury St. Edmund's, a display of corn screening and dressing machines, double action hay-making machines, and self-acting horse rakes.

W. Brenton, St. Germans, Cornwall, combine 1

reapers and mowers, and a dressing and blowing machine.

Bristol Waggon Works Company (Limited) a good display of their agricultural carts and waggons suited for various purposes.

Brown and May, Devizes, an 8-horse power portable Oxford prize steam engine, and a 2½-horse power improved vertical steam engine.

Burgess and Key, a collection of their direct thrust reapers and mowers; in one the driver's seat is now placed at the side of the main wheel. This is also applied to a 1-horse reaper. A new combined machine was also shown for the first time by this firm. A simple system of oilers is applied to the principal bearings of these machines, ensuring a good supply, and excluding dirt.

Charles Burrell, Thetford, an improved patent agricultural road locomotive, similar to that shown at Wolverhampton. The driving wheels are fitted with cross plates instead of plain tires, which render them less liable to slip on soft ground.

Cambridge and Parham, Bristol, chain harrows, Seaman's harrows for general purposes, land presser, clod crusher, scuffle drags, horse rakes, chaff cutters, and horse gear.

Carson and Toone, Warminster, chaff-cutting engines, Moody's turnip cutters, horse hoes, clod crushers and rollers, and cheese presses, haymakers, lamb cribs, and horse hoe.

Clayton and Shuttleworth, Lincoln, an 8-horse and a 6-horse power portable engine, an improved horizontal 12-horse power fixed engine with self-acting differential motion; a 10-horse power traction engine; a double blast-finishing thrashing machine, and a stacking machine or elevator; screw and lever jacks, and other articles.

Coleman and Morton, Chelmsford, a new potato digging machine, two patent cultivators, a liquid manure distributor, the hop syringing machine which took the prize at Wolverhampton; and an adjustable rotary corn screen.

Thos. Corbett, Shrewsbury, "Excelsior" single and double-furrow and pulverizing ploughs; blowing, winnowing, and corn dressing machine, which has taken 46 Royal and other prizes; economic sheep rack, cake-breaker, and an excellent clover drill with an adjustable arrangement of rack and pinion.

W. Cottes and Sons, Epping, chaff-cutters and ploughs.

Crosskill and Sons, Beverley, one of their Manchester prize pair horse waggons, several one-horse carts, a liquid manure cart and some of their well-known clod crushers.

Corcoran, Witt, and Co., of Mark Lane, a fine collection of mill stones, and apparatus for mills, lubricators, wire, and other articles in which they specially deal.

John Davey, Croft-hole, near Devonport, several of his patent "Excelsior" turn-wrest ploughs, in which all the moving parts are turned at once, one breast being placed in proper position, while the other is raised clear of the beam; they have also the patent share stop and coulter adjustment.

Davey, Paxman, and Co., Colchester, their patent steam corn dryer, which took the Royal medals at Derby and Manchester, and the first prize at Essex and Leicester; also, their patent vertical engine and boiler.

C. Dening and Co., Chard, exhibited several of Spencer's patent prize chain corn drills, which are alleged to have several advantages over the cup drills.

W. and S. Eddington and Co., Chelmsford, an improved standard portable 9-horse engine.

Thomas Fardon, Leighton Buzzard, corn and seed drills, Turner's cultivators, horse hoes, chaff cutters, oil-cake cutters, and ploughs.

John Fowler and Co., Leeds, had on view a 12-horse single cylinder traction and ploughing machine, an 8-horse

engine suitable for thrashing and traction work, a patent turning cultivator and harrow, and other apparatus similar to those tried so successfully at Wolverhampton.

Richard Garrett and Son, Leiston, Suffolk, three of their well-known portable engines, corn and seed drills adapted for every country, lever horse hoes, manure distributors, and corn winnowing and dressing machines.

P. and H. P. Gibbons, Wantage, exhibited a portable steam engine and thrashing machine.

W. Gilbert, Shippon, near Abingdon, an improved Suffolk corn, seed, and manure drill.

G. O. Gooday, Stansted, Bishop's Stortford, a multiple needle sewing machine for making thatch.

John Gray and Co., Uddingston, near Glasgow, a double-furrow plough combining Gray's and Pirie's patents, which has been very successful recently in trial matches.

Hayes and Son, Stamford, harvest carts, general-purpose waggons, and other farm vehicles.

Holmes and Son, Norwich, a portable engine and thrashing machine, corn and seed drill, and barley hummeller.

R. Hornsby and Sons, Grantham, several of their mowers and reapers, especially the "Governor" and "Progress" self-rakers, the "Premier" back-delivery reapers; the "Paragon" and "Manchester" mowers and combined mowers and reapers; an 8-horse portable steam engine and thrashing machine, a 12-row corn and seed drill, adjustable corn screens, turnip cutters and root pulpers. Their double-furrow plough has recently attracted much attention, being of the kind now constructed, and as a proof of its efficiency at the great contest at Reepham, Norfolk, Sept. 27 and 28, it carried off the two silver cups for the double-furrow plough which should produce the best and most highly-finished work, and the best general purpose plough. It stood the severest test of the dynamometer, turns easily at the end of the furrow, and has the anti-friction wheel at the rear.

J. and F. Howard occupied a large space with specimens of their various machines and implements, including their well-known steam cultivating apparatus. Important recent improvements having been introduced into their steam ploughs, the beams are made of a section of steel, the framework of wrought iron firmly bolted together, and the wheels of wrought iron. Among their ploughs was the "Champion," suited to every kind of soil and depth; a two-wheel single plough, fitted with hind friction wheel, so that the slade is dispensed with; and a single plough with grabber tines behind, very useful for root ploughing, as the tines thoroughly remove the pan. They also showed double-furrow ploughs, now so much in demand, the draught of which, as tested at the Reepham contest, was very satisfactory; turnover ploughs, and turn-wrest ploughs. There was also a newly-patented harrow, with double-flanged beams, into which the teeth are securely fastened without screws or nuts. Among the harvesting machines were their self-delivery international reaper, brought out last season, which has been improved and strengthened, fitted with two wrought-iron driving wheels of larger diameter, which considerably lessen the draught; their double-action haymaker, and self-acting horse rake. The Howard safety-boiler of this firm, which is now coming into extensive use on land, as well as for marine purposes, must not be omitted. It is built up solely of wrought-iron tubes, the bursting pressure of each of which is at least 1,000lbs. per square inch.

Edward Humphries, Pershore, showed a thrashing machine.

Reuben Hunt, of Earl's Colne, horse-working-power gear, cake breakers, turnip cutters, and other machines. With the new year Ransomes, Sims, and Head

hand over to Reuben Hunt the manufacture of all the food-preparing machinery which they have hitherto constructed.

Hunt and Pickering, Leicester, two-horse grass-mowing machine, combined mower and reaper, a patent raker with anti-frictional crank movements, oilcake breakers, corn crushers, horse-gear, and root-pulpers.

I. James and Son, Cheltenham, a stone or bone crusher, to work by hand or power; an improved chain pump, a gapping drill, liquid manure and water carts.

H. and G. Kearsley, Ripon, a grass mower and combined mower and reaper.

B. Kittmer, Fulston, near Louth, one of his combined dressing and blowing machines.

J. L. Larkworthy and Co., Worcester, Seaman's patent Excelsior ploughs, duck-footed scuffle drags, root pulper, and patent cattle-crib.

Josiah Le Butt, Bury St. Edmund's, patent self-cleaning corn screens, malt screens, Champion double-action hay-making machine, hand seed drills, malt plough, humane lamb hurdles.

T. Lloyd and Son, Old-street, London, prize flour mills, and dressing machines.

Marshall, Sons, and Co. (Limited), Gainsborough, had several of their horizontal and vertical engines and thrashing machines.

Robert Maynard, Cambridge, patent portable steam and horse power sifting chaff engines, which cut the chaff as fast as the straw can be thrashed.

Melburn and Co. (Limited), London, showed their desiccated grains, which have now been in repute for some years as a cattle food.

Murton and Turner, Kenninghall, Norfolk, some improved prize drills, horse hoes, corn dressing machines, and a hand-seed drill.

Nalder and Nalder, Wantage, one of their thrashing machines.

W. and N. Nicholson, Newark, had one of his combined vertical steam engine and boiler complete on foundation bank, some oil-cake breaking machines, disc turnip pulpers, sack elevators, hay-making machines of various kinds, winnowing and corn dressing machines, horse rakes, and chaff cutters.

E. Page and Co., Bedford, adjustable tooth drag harrow, new adjustable knife disc root pulper, corn grinding mill, steel roller, bean mill, and chaff cutter. They also exhibited Mellard's mould-board plough.

A. E. Peirce, Oxford-street, had a fine collection of tubular wheelbarrows, step ladders, feeding troughs, pails, and other utensils.

Penney and Co. (Limited), Lincoln, expanding rotary corn separator with adjustable wires, seed and flour dressing and winnowing machines, lime and malt screens, sack lift, patent draught preventer, root washer.

Picksley, Sims, and Co. (Limited), Leigh, Manchester, had a fine collection on their stand of mowers and reapers and combined ditto, their self-acting side-delivery reaping machine, and their patent reaper with additional crank movement, very light in draught and clean in cut; also some of their prize chaff cutters and root pulpers.

Thomas Perkins, Hitchin, patent strong double-furrow and three-furrow ploughs, patent folding shafts for reaping and mowing machines, and prize drag harrows.

Priest, Woolnough, and Michell, Kingston-on-Thames, Suffolk corn drills, horse hoes and manure distributors, hand clover and grass seed barrows.

Ransomes, Sims, and Head, Ipswich, had on their stand an 8-horse portable steam engine, a 10-horse economical portable steam engine, a patent double-blast finishing steam thrashing machine, a patent double-speeded back-action "Star" haymaker and horse rake; a variety of their well-known ploughs, including the light

general-purpose plough, Newcastle prize plough, turn-wrest plough, subsoil plough, and double-furrow ploughs; and of crushing mills, a combined mill, a steel oat mill, a bean cutter and a universal mill.

Reading Iron Works (Limited), a new series of small-power fixed engines, an 8 and a 10-horse power fixed condensing engine, a thrashing machine, 1 and 2-horse power clipper mower, horse rakes, barley mower, horse gear, and other articles.

R. J. Reeves and Son, Westbury, corn and seed drills, &c., for small occupations; manure and water cart, Andrews' patent stacker and elevator, manure distributor, and other articles.

Benjamin Reid and Co., Aberdeen, disc corn and seed drill, winnower, broad-cast sowing machine for corn and seed, patent drain-cleaning rods, press drill, adapted to cultivation by irrigation, and good models of drills, and of a wire bridge for parks and pleasure grounds.

Riches and Watts, Norwich, disc root pulpers with adjustable cutters, oilcake mills, American and Eureka grist mills and a model engine.

Richmond and Chandler, Salford, a fine collection of their celebrated chaff cutters, the endless feeding web to these is of great use and safeguard to the man at the mouth; two lengths of cut and a stop motion are added to the power machines. Several sizes of corn-crushing machines were shown, a 1-horse power horse-gear for small machines and some excellent steaming apparatus.

E. and H. Roberts, Stony Stratford, exhibited grist mills, chaff cutters, cake breakers, bean mills, root pulpers, horse works, and a portable mower and reaper knife stand, also a novel self-feeding sheep cot.

Robey and Co., Limited, Lincoln, specimens of their portable engines with expansion apparatus worked directly by the governor, and of their vertical high pressure stationary engines, thrashing machines and straw elevator, and a wheel of one of their road steamers for hauling waggons on common roads.

J. G. Rollins, of London, a fine collection of hay and manure forks and spades, grindstones, weighing machines, pumps, and lawn mowers.

Ruston, Proctor and Co., Lincoln, a fixed engine, 2 portable engines, a saw bench and other articles.

Samuelson and Co., Banbury, had a fine collection of grass mowers, reapers, lawn mowers, and turnip cutters. With regard to all these machines, it appears that little novelty in principle must be looked forward to at the hands of these makers, their reaping and mowing machines having now reached a fixed standard, and become in this respect almost similar to the turnip cutter. In the self-raking reaper we observe several improvements of this kind, including an improved sickle-pin slide, which permits the sickle pin to be taken out very easily without removing a bolt; improved means of raising the off side, changes in the mode of putting in and out of gear, new method of locking the nuts, change in the form of the fingers for discharging all cloggy matters beneath the knife bar, a broader off-side wheel, and an improved head lifter. In the grass mower and combined machine there is less change, one or two minor details only appearing to have demanded alteration; while the Eclipse reaper, which has reached the tenth year of its manufacture, comes before the public without any change in its construction.

W. Sawney, Beverley, a winnowing and blowing machine, a sheep rack, and a sack lifter.

Smith & Grace, Thrapston, gave special attention to chaff cutters, bean mills, and grist mills, which with root pulpers and cake breakers, are the chief objects of their manufacture.

W. Smith, Kettering, had a display of horse hoes, grindstones, and other useful articles.

Southwell & Co., Rugeley, showed a good collection of

chaff cutters for hand or power, corn crushers with roller faces of solid steel, oil-cake breakers with covered cog-wheels, and disc root pulpers, strippers and slicers, and grist mills with chilled surfaces.

G. Stacey & Sons, Uxbridge, had a few chaff cutters.

W. Tasker & Sons, Andover, had of their corn dressing machines, which took the Royal prize at the Bury meeting, an eight-horse portable engine with patent adjustable eccentric and an efficient feed water heater, with thrashing machine, and one of King's drop drills for dibbling seed and manure.

E. R. and F. Turner, Ipswich, several roller mills for crushing corn, malt, seed, and grinding beans, oil-cake breaker, hand and other grinding mills, an engine and combined thrashing and dressing machine.

Tuxford & Sons, Boston, exhibited their prize cultivating windlass, and portable eight-horse engine, and two small improved portable engines, with which they have generally stood the trial tests so well.

W. S. Underhill, Newport, a vertical engine, two-horse double-furrow frictionless ploughs, and single ploughs, horse rakes, four-furrow turnip drills for large occupation root growers.

Vulcan Iron Works (formerly T. Smith), Ipswich, showed counterbalance horse rake, wrought iron cultivator, or broad-share scarifier and harrow combined, new patent beam and Excelsior harrows, and an improved portable sheep rack.

Wallis & Stevens, Basingstoke, an eight-horse portable engine with a fifty-four-inch combined finishing thrashing machine, and slow motion automatic folding elevator, with one-horse gear for driving it.

Joseph Warren, Maldon, chaff machines, an adjustable cultivator and scarifier, horse rakes, ploughs and harrows.

T. W. Wedlake & Co., Hornchurch, a 3½-horse portable glandless steam engine, a portable corn mill with grey stones, horse gear.

J. Whitmore & Co., London, a large collection of wheat grinding and dressing machines, malt and seed crushers.

W. A. Wood, London, some of his well-known mowers and reapers, particularly the Champion self-delivery.

Woods, Cocksedge & Warner, Stowmarket, samples of their root pulpers, cake breakers, and crushing and grinding mills; combined vertical steam engine and boiler, which, put on wheels, is handy for moving, and will consume any kind of fuel; horse gear, and other articles.

THE ROOTS AND SEEDS.

The leading seed merchants vied with each other on this occasion as to who should make the most effective and startling display of mammoth mangolds, cattle cabbages, prize potatoes, and other Brobdignag wonders, and considering the limited gallery space, they monopolised a considerable share. Among the most prominent as regards arrangement and samples shown were certainly Sutton and Sons, of Reading, whose long red sweet mangolds weighing half a cwt. each, yellow globes of 45lbs., champion swedes, and intermediate mangolds of 26lbs. and 28lbs. weight, attracted general admiration from the crowds of visitors. James Carter and Co., of Holborn, also ran very closely with mammoth long red mangold and other prize roots and seeds. Thomas Gibbs and Co., the old-established seedsmen to the Royal Agricultural Society, London, had also a noble display of roots, comprising yellow globe mangolds, kohlrabi, swedes, globe and stone turnips and carrots, besides grasses for pastures and meadows. To go over the exhibits of the other leading seed firms would be but to enumerate the objects, and we must content ourselves therefore with naming the houses, and stating that they

all sought to merit a continuance of support by the excellence of the seeds, agricultural grasses growing, and other objects shown: George Gibbs and Co., London; Radclyffe, Dick, and Co., London; Raynbird, Caldicott, and Co., Basingstoke; Wheeler and Son, Gloucester; and J. R. King, Coggeshall. The latter had on his stand roots which were shown by him at Smithfield last year, at the meeting of the Royal in July, and at other shows, and they were as sound as when first shown.

THE SMITHFIELD CLUB ANNUAL MEETING.

The annual meeting of the Club was held on Tuesday in the Show week, at the Agricultural Hall, the attendance being numerous. The chair was taken by the President, the Marquis of Exeter.

The Honorary Secretary, Mr. Brandreth Gibbs, after reading the minutes of the last meeting, which were confirmed, read the following report of the Council:

The Council beg to lay before the general meeting the report of their proceedings during the past year. The Council have held three meetings, which have been well attended, and in addition to the ordinary routine of business the following subjects have had their careful consideration:

1. The detention for some days at the close of the last Show of a large number of animals, purchased to go into the country, in consequence of foot-and-mouth disease having broken out in the yard. The Hon. Secretary was requested to point out to the veterinary department of the Privy Council the inconvenience and loss that accrued to the owners of the stock in consequence; and to request that if possible some definite arrangement might be made to meet such a contingency if it should again occur. The Council have the satisfaction of reporting that the application has been successful, and that in granting the licence for the present Show, the Lords of the Council have provided for the same as follows:

Cattle moved out of the Show and then out of the Metropolis shall be moved only in manner and subject to the conditions following:

- (1.) There shall be a licence of the Commissioner of Police of the Metropolis for the movement.
- (2.) Such licence shall only be granted on a certificate of health signed by one of the veterinary surgeons for the Show, and a certificate of the pass-master of the Show of the cattle having been exhibited in the Show.
- (3.) If the cattle are moved out of the Metropolis by railway, they shall be conveyed in properly constructed cattle-vans, without stopping, to the railway-station, and there be transferred from the vans directly to the railway-truck.
- (4.) If the cattle are moved out of the Metropolis otherwise than by railway, they shall be conveyed without stopping, from the Show out of the Metropolis, in properly constructed cattle-vans.
- (5.) Provided that if any cattle being so moved, while in the metropolis, come accidentally or otherwise in contact with any cattle not having been exhibited at the Show, they shall not be moved out of the Metropolis, but shall be slaughtered in the Metropolis.

Therefore the healthy animals will not be detained.

II. The Right Hon. Lord Peurhyn, who was chosen as President-elect at the last general meeting, intimated to the Council his regret that advancing years would prevent his discharging the duties of President; but his lordship by presenting the handsome donation of £100 has manifested the interest that he takes in the welfare of the Club. The Council voted their best thanks for the same, and they have elected the Right Hon. Lord Tredegar V.P., to fill the office of President for the year 1872.

III. The Council have to lament the loss by death of the Right Hon. Lord Berners, the Right Hon. Lord Walsingham, and the Right Hon. the Earl of Aylesford, Vice-presidents of the Club; and, also of Mr. John Clayden, the Chairman of the

Agricultural Hall Company, and Mr. Richard Stratton, both members of the Council. Mr. Clayden would have retired by rotation at this meeting, and therefore the Council have not filled the vacancy caused by his death. They have elected Mr. Joseph Stratton in the place of Mr. Richard Stratton.

IV. The Council have revised the prize-sheet for the present Show, and the following alterations have been made: In the division for Scotch polled cattle a new class has been established for cows separate from the heifers. In the Irish division the wording has been amended so as to keep the classes exclusively for Irish breeds. The class for light-weight cross-bred sheep has been discontinued. The rule restricting any animal once exhibited at the Club's Show from being again shown, except as extra stock, has been expunged, and in lieu thereof the following substituted: No animal exhibited at any previous Show of the Club can again compete in the same class. Several minor alterations and emendations have been made.

V. The Council resolves, that in consequence of the inconvenience and risk attending the animals being led out before the judges by the men provided by the Hall Company, and who were strangers to the animals, in future the men in charge of them should perform this duty.

VI. The Council has taken into consideration suggestions made by some members at the last general meeting relative to the preparation of the house list of the members to be recommended for election on the Council; and the Council arrived at the decision that it would be inexpedient to make any alteration in the bye-laws in this respect.

VII. The Council have increased the number of the Judges Selection Committee by the addition of such of the eight senior members of the Council (*i. e.*, those who will retire this year) as are not exhibitors. The Committee therefore now consists of the President, the six Stewards of Live-stock, the eight senior Members of Council.

VIII. In consequence of great inconvenience having been experienced relative to the prize tickets and the placards placed over the animals being taken away by unauthorised persons, the Council determined that means be taken to prevent their removal, and arrangements have been made so that the exhibitors' servants in charge will receive a copy of the prize card to take home with them, and that the butchers purchasing animals will be supplied with a clean ornamental placard and prize ticket (when so awarded), in order that these authentic documents may be placed upon the carcasses when exhibited publicly in the butchers' shops.

IX. The Council have determined that in addition to having every animal weighed and its live weight published, the butcher purchasing each shall be invited to send in a return of the dead weight, and that the name and address of the purchaser shall be published in conjunction therewith in recognition of the wishes of the Club having been complied with.

X. The Council having received a communication from the Agricultural Hall Company to the effect that the publication of an implement catalogue entailed a pecuniary loss, the Council resolved to accept the offer of the Company to add to the stock catalogue a list of implement exhibitors, with the address and trade of each, the number of the stand, and a plan of the building, indicating the position of each stand.

XI. The Council have again voted their thanks to the Rector of Islington, for the special divine service on Sunday last for the herdsmen and shepherds.

XII. The Council lay before the meeting printed copies of the annual balance-sheet duly audited, showing balances in hand on the 1st of December, £2,863 11s. 10½d., and stock invested in the Three per Cent. Consols, £4,664 18s. 11d. This statement will as usual be appended to the prize sheet for the coming year, and sent to each member of the Club.

XIII. The Council have to express their deep regret that the severe and protracted illness of his Royal Highness the Prince of Wales has prevented his being able to carry out his intention of honouring the Club by visiting the Show yesterday afternoon, as had been previously arranged.

XIV. The Council regret to have to report that 18 cattle found by the veterinary surgeons of the Show to be suffering from the foot-and-mouth disease, had to be refused admittance into the Show, in accordance with the conditions of the licence granted by her Majesty's Privy Council. Each of these animals was carefully examined by Professor Simonds, in the

presence of the Stewards of the Club. These animals were taken charge of by the local authorities.

The Council, having regard to the great importance of this subject as affecting the future exhibitions of the Club, and the necessity of all due precautions being taken for the protection of exhibitors' interests so long as the disease shall continue to be prevalent, have determined to endeavour to ascertain the feelings of the members of the Club generally by inviting a discussion at the general meeting on the following point, viz.: "Whether animals exhibited elsewhere within a limited period before the date of the Club's Show, should, or should not, be admitted in future, during the prevalence of the foot-and-mouth disease?" The Council will take the opinions then expressed into final consideration at the February Council meeting. The Council will then discuss whether any, and if so, what modifications shall be sought to be obtained from the Privy Council in reference to the regulations affecting the foot-and-mouth disease generally.

By order of the Council,

(Signed) B. T. BRANDRETH GIBBS, Hon. Sec.

In accordance with the new regulation on the subject, the balance-sheet was laid on the table for circulation among the members present.

Lord Tredegar having moved, and Mr. Turner having seconded, the reception and adoption of the report,

Mr. HEATH said he should like to say a word on the subject of the cattle in the adjoining yard, which were suffering from foot-and-mouth disease. He was unfortunately one of those exhibitors whose cattle were locked up, and he thought it was hard that he should not be allowed to go and look at the bullock himself. He had made application to be permitted to do so several times, but without success. He had seen people running in and out of the yard, and in his opinion they were quite as likely to carry the disease as he would be if admitted. He believed that if he had seen his animal on the previous day he could have thrown the whole of the fever off him in four-and-twenty hours. Only ten minutes ago he saw a bullock standing within a short distance of his Hereford, slaving at the mouth, and just as likely to be dangerous to the cattle around him as his own animal that was locked up would be in the same position.

Mr. GIBBS said perhaps he might be allowed to explain that the animals placed outside the showyard were in the hands, not of the stewards or officers of the Club, but of the local authorities. They were completely out of their jurisdiction, and under the control of the local authorities.

Mr. HEATH asked if the Secretary could give any information as to how he should make application with regard to his ox.

Mr. GIBBS said that no doubt the necessary information would be obtained from Mr. Allen, the veterinary inspector of the district.

The CHAIRMAN then, in accordance with a recommendation in the report, invited the expression of opinions on the following point: "Whether any animals exhibited elsewhere within a limited period before the week of the Club Show should or should not be admitted in future during the prevalence of the foot-and-mouth disease;" adding that the Council would be glad to hear any remarks which might be made on that subject.

Mr. R. WORTLEY (Norfolk) thought it was safer during the prevalence of the disease not to admit the animals. It was better that they should be shut out than that so many exhibitors should suffer from the spread of the disease.

Mr. E. WORTLEY (Rutland) did not think that any restriction on exhibitors was necessary beyond having the proper certificate of health to show.

Mr. SMITH (Exeter) said his servant had told him that a beast which had come direct from the farm was almost the first set aside by the veterinary surgeons. It would be as well, therefore, to ascertain where such animals came from, because there was perhaps too great a tendency to throw the blame upon the Birmingham Show.

Mr. BEASLEY, one of the stewards, said it was true that some of the animals affected had come direct from the farm, but a very large proportion of them had come from Birmingham.

Mr. E. WORTLEY said the proportion of beasts from Bir-

mingham was itself large as compared with what came from any other quarter.

Mr. BEASLEY: We do not want to quote Birmingham alone. Some of them may have come from Oakham.

Mr. SMITH said he had been informed that the servants employed by the veterinary surgeons to open the animals' mouths when they were being examined did not wash their hands before proceeding from one beast to another.

Mr. BEASLEY said that so far as they were under the control of the Club the servants did wash their hands after opening the mouth of one animal before proceeding to another, having had a fresh bucket of water brought them for the purpose.

Mr. TURNER suggested whether it might not be advisable to have the beasts inspected before they were removed from home.

Mr. GIBBS said the plan had been tried during the cattle plague, but exhibitors complained of the expense.

Mr. GIBLET hoped that the meeting would see the propriety, and almost necessity, of sending a deputation to wait upon the Privy Council to ask for a modification or the removal of many of the restrictions relating to foot-and-mouth disease. He represented not merely his own feelings, which were very decided on the subject, but the opinions of a great many influential men for whom he was engaged. Having travelled far and wide throughout the country, he found that foot-and-mouth disease was almost universal. He had seen it in almost every market he had been in. He believed it was the opinion of eight out of every ten men in the country that the present laws on the subject were calculated to perpetuate the disease rather than to suppress it. He had stated that in the highest quarters—to men who had to do with the framing of those laws—and he had had their concurrence in his views.

Lord BRIDPORT said in order that the proceedings might go on regularly, he would suggest, and indeed propose, that the question should be referred to the Council meeting in February, before which there would have been sufficient time to consider the whole matter. He was strongly of opinion that it was the interest of the Club that animals which had been exhibited within a certain period should be excluded.

Mr. TORR begged to second the proposal of Lord Bridport. He quite agreed with a preceding speaker that foot-and-mouth disease was giving the authorities as much trouble as the cattle plague did; but that arose from the circumstance that they never troubled themselves about the matter. He (Mr. Torr) went on the broad principle that foot-and-mouth disease was so prevalent all over England that if very strong restrictions had been adopted at that Show, they would have had a very few animals in the Agricultural Hall; and he thought it was rather unfair to tax Birmingham with a fault which they themselves might have committed if there had been any more Shows to follow. So far as grazing steers and growing stock were concerned foot-and-mouth disease did very little harm; but in the case of milch cows and sheep it was fatal to an extraordinary extent, as he knew from his personal experience. If forty three-year-old steers were offered to him he would not be disposed to give 10s. 6d. per head less for them on account of their having foot-and-mouth disease. He thought that Lord Bridport had taken a most sensible course in proposing that the matter should be referred to the Council meeting in February. The Council would be enabled to gather lessons from what they had seen of that Show, and of the Birmingham and other Shows; and perhaps the result might be something in the shape of a memorial to the Privy Council from the Council of the Smithfield Club, showing what harm had been done and suggesting a remedy.

A MEMBER asked whether there ought not to be a general meeting of the members early in the year?

Mr. TORR replied that there was no reason why there should not be a general meeting if one were desired.

Mr. HEATH observed that the number of members having increased so largely, he should be glad to see some new names on the list. There were now nearly 500 members, and of that number very few he believed had served on the Council.

Mr. E. WORTLEY did not wish to say one word against the Council, but thought it would strengthen its hands to have an expression of opinion from the members generally. Why not take the opinion of that meeting as to whether, if the foot-and-mouth disease existed another year, it would be necessary to do anything more than require the production of

the certificate of a properly qualified veterinary surgeon to the effect that the beasts were free from the disease when sent there?

Mr. TORR thought it would not do to let what was done one year rule what was done in another.

The proposal of Lord Bridport was then put and adopted unanimously.

The report was also adopted.

Mr. SMITH (Exeter) said he hoped a general meeting would be held, as the question was a very wide one.

Mr. TORR observed that the President of the Club had full power to convene a general meeting if he thought it necessary to do so, or on receiving a requisition signed by a certain number of members; but he had supposed that the adoption of the motion just passed was intended to be a substitute for that course.

Mr. GIBBS said, having had some experience in that Club for a great many years, he could testify that when they had endeavoured in cases of great importance to get a good general meeting of the members, there had only been about half a dozen, or seven or eight persons present. He thought that any expression of opinion on the part of that annual meeting would be of far more consequence in strengthening the hands of the Council than such an expression on the part of a meeting convened at a period of the year when probably only very few members would attend. He then proceeded to read a list of the chief prizes awarded for the Show.

Mr. BYRON said it had always been his ambition, ever since he first became an exhibitor, to win a £20 plate; but he never expected to win anything more.

Mr. RIGDEN said it was his good fortune to win the first silver cup that that Club ever awarded, and not having won one since, he was glad to find that it had come back again. He should have been more gratified had he succeeded in getting the Cup that went with the Lincolns; but he had no doubt that if the judges had had an opportunity of tasting the mutton in both cases, their decision would have been in his favour.

Mr. BIGGS briefly returned thanks for the silver Cup presented to him for the best pen of pigs in the yard.

Lord BRIDPORT said he had a proposal to make, which he was sure would be cordially adopted—namely, that his Grace the Duke of Richmond be elected President for 1873. They had, his lordship remarked, had experience of his grace's conduct in the chair already, and they must all recollect how ably he fulfilled the duties of President; and he felt certain that if his grace accepted the present nomination, his manner of fulfilling the duties undertaken by him would be equally satisfactory.

Mr. W. RIGDEN seconded the motion, which was at once adopted.

Mr. W. TORR, in moving the election of six new Vice-Presidents, said: Since the last meeting they had lost by death Lord Berners, Lord Walsingham, and Lord Aylesford, and they had also lost the services of Lord Penrhyn for the reason mentioned in the report. In selecting six new names, the Council had endeavoured to secure the best representation of six different districts of England, and he believed they would command the confidence of the members of the Club. He had to propose that the Duke of Sutherland, Lord Chesham, Lord Cowper, Lord Kesteven, the Hon. Col. Kingscote, M.P., and the Hon. Col. Loyd Lindsay, M.P., be added to the list of Vice-Presidents.

Mr. W. FARTHING seconded the motion, and it was agreed to.

On the motion of Mr. W. Rigden, seconded by Mr. Webb, the trustees were re-elected.

Mr. MOORE said he felt great pleasure in proposing the re-election of the Honorary Secretary. He was glad to have that opportunity of performing such a duty, having recently observed more than he had previously been able to do how much that Club was indebted to Mr. Gibbs for the able and business-like manner in which he conducted the business of the Club (cheers).

Mr. ELLMAN having seconded the motion, it was adopted; and Mr. Brandreth GIBBS briefly returned thanks.

Several new members were elected; after which, it was announced from the chair that there was a large majority in favour of the House List of the new members of the Council. The retiring members of the Council were Mr. H. Aylmer, Mr. J. Beasley, Mr. C. S. Bigge, Mr. J. Clayden (deceased), Mr. C. Howard, Mr. W. Ladds, Mr. C.

Randell, and Mr. J. Wilson. The following were elected in their places: Mr. J. Greetham, Stainfield Hall, Wragby, Lincolnshire; Mr. T. Horley, jun., The Fosse, near Leamington; Mr. H. W. Keary, Bridgenorth, Salop; Mr. R. Leeds, Castleacre, Brandon; Col. H. Lowther, Barleythorpe Hall, Oakham; Mr. J. Quartly, Molland, South Molton; Mr. J. Shuttleworth, Hartsholme Hall, Lincoln; Mr. H. Trethewy, Silsoe, Ampthill, Beds.

Lord TREDEGAR, in proposing a vote of thanks to the President, remarked that it was his good fortune to be present at the sumptuous entertainment given by his lordship to the Council on the previous day, and they all felt deeply obliged to him for his hospitality.

Lord BRIDFORD seconded the motion, which was carried by acclamation.

The CHAIRMAN, in returning thanks, said it gave him great pleasure to accept the invitation to become President of the Club, and he had found the duties not onerous, but pleasant, in consequence of the able assistance which he had received from the Hon. Secretary, Mr. Brandreth Gibbs. He was exceedingly obliged to that gentleman for the aid which he had afforded to him during his year of office, and he was sure that any future President, who was in the same position in that respect, would feel equal gratitude at the expiration of his term of service.

The meeting then separated.

THE METROPOLITAN GREAT CHRISTMAS CATTLE MARKET.

The Annual Christmas Fat Stock Market was held Dec. 11, according to custom. Although some very fine stock was exhibited, the general character of the show did not call for any particular comment. In point of numbers, the show was not so strong as on some recent occasions; but this must be attributed to the regulations still in force respecting the transit of cattle. At the same time, the losses sustained by the foot-and-mouth disease during the earlier part of the season had engendered much caution on the part of graziers, and in many instances stock has been sent forward to the market much earlier than would have been the case, owing to the chance of loss, or deterioration of quality through the foot-and-mouth disease. Unlike its predecessor, the past season has been decidedly favourable for the rearing and fattening of cattle. With seasonable weather graziers have been enabled to keep their stock in the field. They have also been blessed with more substantial advantages as a set off against the chances of loss from disease. The hay crop has been very large, and with the exception of the commencement of the season, when some grass was carried in damp condition, and some portion of it was only fit for the dung heap, in consequence of the rains, by far the larger proportion was satisfactorily got in. At the same time the root crops have turned out well. A heavy yield has been secured, and the quantity has been excellent. Graziers have therefore had increased facilities offered them for the rearing of stock, whilst the price of keep has been somewhat diminished. Last year the reverse of this was more directly the case. The hay crop proved to be an almost entire failure, and the partial success of the root crop but poorly compensated for the loss sustained in the graver respect. The actual weight of meat on sale to-day was barely an average. Those large heavy Beasts, until recently rather common in the market, are now gradually disappearing, and are giving place to the smaller, more symmetrical and weight carrying animal. On the whole the quality of the English stock excited admiration, and it testified to the excellence attained by home breeders in the art of rearing live stock. A noteworthy feature in the show was the improvement in the quality of the foreign stock. The success which has hitherto attended the attempts of foreign breeders to improve their stock, and to enable them to cope more successfully with their English brethren, has been great, and, indeed, is patent to anyone conversant with the condition of the foreign receipts some six years since and those now offered. However, foreign breeders have not as yet arrived at the acme of perfection, although they certainly have made some considerable strides towards that object.

The Scots carried off the prize in point of excellence and there was also a fine show as regards number. North

country graziers are not disposed to yield the palm for purity and quality. The show of stock to-day was in every respect satisfactory, although it must be admitted that the abundance and cheapness of food have enabled Scotch graziers to rear their stock at a minimum of expense.

Shorthorns were well represented, both as regards number and condition. Devons were not freely offered, but the quality was good. Hereford Cattle were not well represented, and there were very few Sussex beasts on the stands. Some choice Welsh runts were offered, and there were a few Irish beasts whose condition did not call for special comment.

As regards foreign stock a moderate supply was on offer, including French, Spanish, and Dutch beasts in improved condition.

The annexed return shows the number of Beasts exhibited, and the prices realised for them, on the "Great Days" during the last 30 years:

Year.	Beasts shown.	s.	d.	s.	d.
1841	4,500	3	8	5	0
1842	4,541	3	4	4	8
1843	4,510	3	8	4	4
1844	5,713	4	0	4	6
1845	5,326	3	6	4	8
1846	4,570	4	0	5	8
1847	4,282	3	4	4	8
1848	5,942	3	4	4	8
1849	5,765	3	4	4	6
1850	6,341	3	0	3	10
1851	6,103	2	8	4	2
1852	6,271	2	8	4	0
1853	7,037	3	2	4	10
1854	6,181	3	6	5	4
1855	7,000	3	8	4	2
1856	6,748	3	4	5	0
1857	6,856	3	4	4	8
1858	6,424	3	4	5	0
1859	7,560	3	6	5	4
1860	7,860	3	4	5	4
1861	8,840	3	4	5	0
1862	8,430	3	4	5	0
1863	10,370	3	6	5	2
1864	7,130	3	8	5	8
1865	7,580	3	4	5	4
1866	7,340	3	8	5	6
1867	8,110	3	4	5	0
1868	5,320	3	4	5	8
1869	6,728	3	6	6	2
1870	6,425	3	6	6	2

The following are the particulars of some of the best portion of this morning's market:

Mr. George Dickson's alley was well filled with Scotch Beasts, principally from the counties of Aberdeen and Banff, and which attracted much attention. The leading lots from Aberdeen were forwarded by Messrs. Knowles, Wishart, Mitchell, Reid, Frost, Beddie, Bruce, Wylie, and Lawson. Those from Banff by Messrs. Longmore, Stoddart, Milne, Pirie, Bartlett, and others.

Messrs. Giblett and Son also had for disposal some excellent Scotch Beasts, bred by Mr. McCombie, M.P., of Tillyfour, Aberdeen; but Messrs. Hicks and Son had one of the largest shows of Scotch cattle, many of these being of first rate quality, and sent from some of the principal graziers and dealers of Aberdeenshire, among whom may be mentioned:—Messrs. Jas. Reid of Grey-stone, A. Mennie of Huntley, A. Bruce of Mid Clova W. Wallace of Chapel of Seggat, A. Beddie of Newlands Hill, J. and W. Martin of Aberdeen, A. McDonald and A. Davidson of Peterhead, A. Stoddart of Munyfold, Geo. Wilson of Milton of Noth, A. Strachan of South Haddo. From Norfolk, Messrs. Postle, S. Gardner, and W. Salmon had some fine cattle at the same stand.

Mr. Duckworth had some choice stock forwarded by Mr. Hudson, and there were also some prime Beasts at the stands of Messrs. Maydwell and Hoyland, Hicks, Thomas Dixon, and Vorley.

The Sheep pens were not overstocked, but some fine breeds were offered. Mr. Collins had some good Downs and Half-breds forwarded by Messrs. Harris, Curtis, and Caird, of Essex.

At Messrs. Lintott and Son's stand were some choice Downs, the property of Mr. Hobgen. There were also

some good Leicestershire, Hertfordshire, and Dorsetshire animals.

Some of Mr. Foljambe's Sheep were in the market; but we failed to notice any sent forward by Mr. Overman.

At the stands of Mr. Stallibrass, Mr. Dodd, Mr. Walsh, and Messrs. Watton and Sons were some good Downs, Half-breds, and Leicesters.

STATE OF THE TRADE.

Notwithstanding the cold weather there has been an absence of animation in the trade. This is doubtless attributable to the fact that the time between this and Christmas is too long to suit butchers, and they have consequently exercised more caution in dealing. On the other hand, the general excellence of no small proportion of the supply has been the theme of universal comment, and has imparted a firm tone to the quotations. The best Scots and crosses have occasionally made 6s. 2d., but 6s. per 8lbs. has been the more general top quotation.

From Lincolnshire, Leicestershire, and Northamptonshire we received about 2,000 Shorthorns, &c.; from Norfolk, Suffolk, Essex, and Cambridgeshire about 1,500 Scots and Crosses; from Scotland, 1,190 Scots and Crosses; and a moderate supply from Ireland.

In the Sheep market there has been a quiet tone prevalent, but the shortness of the supply has imparted a firm tone to prices. For the best Downs and Half-breds 6s. 10d. to 7s. per 8lbs. has been paid.

For Calves there was more inquiry, and prices were higher.

Pigs were steady in value, with a moderate demand.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, December 6.*—

Present: Sir Watkin W. Wynn, Bart., M.P., President, in the chair; Viscount Bridport, Lord Chesham, Lord Tredegar, Lord Vernon, Sir A. K. Macdonald, Bart.; Mr. Baldwin, Mr. Barthropp, Mr. Booth, Mr. Bowly, Mr. Cantrell, Colonel Challoner, Mr. Clive, Mr. Davies, Mr. Dent, M.P.; Mr. Druce, Mr. Edmonds, Mr. Braudreth Gibbs, Mr. Hornsby, Mr. Bowen Jones, Colonel Kingscote, M.P.; Mr. Leeds, Mr. M'Intosh, Mr. Masfen, Mr. Milward, Mr. Pain, Mr. Randell, Mr. Rigden, Mr. Sanday, Mr. Shuttleworth, Mr. Stone, Mr. Thompson, Mr. Torr, Mr. G. Turner, Mr. Jabez Turner, Mr. Wakefield, Mr. Earle Welby, M.P.; Mr. Wells, M.P.; Mr. John Wells, Mr. Whitehead, Mr. Jacob Wilson, and Dr. Voelcker.

The following new members were elected:

Angas, George, Beeford Grange, Lowthorpe, Hull.
Baird, Alexander, Robeston Hall, Milford Haven.
Balston, Richard James, Boxley Abbey, Maidstone.
Bott, Joseph Fennell, Morrell Koothing, Dunmow.
Boucher, Charles, Caenby, Market Rasen.
Bradbury, G. E. Hobroyd, Longroyde, Rastrick, Yorkshire.
Cocks, Charles, Packington, Lichfield.
Eve, Frederick, Sherington, Newport Pagnell.
Fremlin, W. Arthur, Teston, Maidstone.
Hack, Algernon, Buckminster, Grantham.
Heneage, Edward, Hainton Hall, Wragby.
Hilliard, Rev. J. A. Stafford, Little Wittenham, Abingdon.
Huntley, W. V., Welsh St. Donatts, Cowbridge.
Leighton, Stanley, Sweeney Hall, Oswestry.
Mackenzie, James, Camden Quay, Cork.
Paull, James W., Knott Oak House, Ilminster.
Pogson, Frank M., Caythorpe, Grantham.

Pratt, Frederick, Greatford, Stamford.

Price, Henry, Undy, Chepstow.

Pybus, John, Court Farm, Magor, Chepstow.

Rowcliffe, E. Lee, Hall Place, Craunleigh, Guildford.

Stratton, Rev. J. Y., Ditton Rectory, Maidstone.

White, George, Hunton, Maidstone.

Wright, William, Fiskerton, Newark.

Wright, W. Twaites, St. Nicholas, Cardiff.

FINANCES.—Major-General Viscount Bridport (chairman) presented the report, from which it appeared that the Secretary's receipts during the past month had been examined by the committee, and by Messrs. Quilter, Ball, and Co., the Society's accountants, and found correct. The balance in the hands of the bankers on November 30 was £337 14s. 1d. The committee recommend that £500 be sold out of the reserve show fund to meet payments required. The committee recommend that the bye-law No. 76, relating to members compounding for their subscriptions, be extended to governors of the Society. The committee have met nine times, and made nine reports.—This report was adopted.

JOURNAL.—Mr. Thompson (chairman) reported that 19 competitors* had entered their farms for the prizes

*Campbell, John, Down Hanstephan, Carmarthen.

Culverwell, James, Penrose Farm, Abergavenny.

Falconer, Archibald, Berlandrywyll, Llandilo.

Hall, William, Ty Newydd, Brecon.

Hill, John, Llancayo, Usk.

Jones, Griffith, Trevigin, Cardigan.

Jones, John, Pant-y-Goetre Farm, Abergavenny.

Owen, Daniel, Ash Hall, Cowbridge.

Parsons, Valentine, Slough Farm, Caerwent, Chepstow.

Powell, William S., Eglwysnnyd, Taibach.

Price, Henry, Undy, Chepstow.

offered by the President and the Society; that Mr. Bowstead, of Eden Hall, Penrith, had accepted the office of reporting judge; that the President had nominated Mr. Thomas Jenkins, of Plasyward, as one of the remaining judges; and that the Secretary had been instructed to obtain the services of another judge on the list prepared by the committee. It was recommended that the application from the Viceroy of India for a complete set of the Journal, and from the Veterinary Department of the Privy Council for the numbers since 1864, should be acceded to. It was also recommended that the botanical report of Mr. Carruthers, F.R.S., be printed in the next number of the Journal, and that a Botanical Committee be appointed, as jointly recommended by the Journal and Chemical Committees. In reference to the protest of Messrs. Robertson and Richardson against the report of the judges of churns at the Oxford meeting, as published in the Journal, the committee, after consultation with the judges, see no reason to alter the report in question. This report having been adopted, Mr. Dent Dent, M.P., moved that the chairman of the French Peasant Farmers' Seed Fund (Lord Vernon) be requested to furnish, for publication in the Society's Journal, an account of the agricultural features of the work of that institution. This resolution having been seconded by Mr. Wakefield, was carried unanimously.

HOUSE.—Major-General Viscount Bridport (chairman) reported the recommendation of the committee, that a new arrangement be made with reference to the porter, and that in the meantime, pending such arrangement, the necessary temporary assistance in the household be procured.—This report was adopted.

LORD VERNON'S COMMITTEE ON RECEIPTS AND EXPENDITURE.—Lord Vernon (chairman) reported that the committee had arranged a schedule of questions to be referred to the several standing committees of the Council, and that it was recommended that comparative statistical tables in reference to these questions, comprising the receipts and expenditure for the last ten years, be printed for the use of the Council.—This report was adopted.

STOCK PRIZES.—Mr. Milward (chairman) reported the following recommendations of the committee: (1) That no second prize be given unless at least three animals be exhibited, except at the special recommendation of the judges, with the consent of the stewards; (2) that sheep unfairly prepared for show, by oiling or colouring, may be disqualified on the recommendation of the inspectors of shearing; and that (3) the conditions relating to cows and heifers producing living calves be modified in accordance with the resolution at the last Council meeting. This report having been adopted, it was moved by Mr. Jacob Wilson, seconded by Mr. Bowly, and carried unanimously, that the general rule No. 19 of the stock prize-sheet be amended to read as follows: "No animal can be removed from its place without leave from the director or stewards, and any infringement of this or any other rule will render the exhibitor liable to a fine of £1 by the stewards, and to the forfeiture, by decision of the Council, of any prize he may be entitled to; nor can any animal be taken out of the showyard without leave in writing from the director or stewards."

VETERINARY.—Mr. J. Dent Dent, M.P., reported that, in consequence of the death of Professor Spooner, the post of Principal of the Royal Veterinary College is now vacant; and that it is possible that alterations may be made in the staff and course of study at the College. Under these circumstances it was recommended that the Council do postpone its decision on the relations of the Society to the College until the committee are able to make a further report.—This report was adopted.

GENERAL, CARDIFF.—Lord Vernon (chairman) reported that the lists of prizes, proposed to be offered by the local committee of the Glamorganshire General Agricultural Society, had been revised, and were recommended for adoption; that the offer of some additional prizes by the Marquis of Bute be gratefully accepted; and that the following members of the local committee be added to the general Cardiff committee: The Mayor of Cardiff; W. Alexander, Esq.; J. S. Corbett, Esq.; G. C. Williams, Esq.; Major Turberville. The committee had also considered the proposition of the local committee that they should have a separate yard, in which hunters exhibited should be allowed to jump, but they did not recommend this proposal to the Council.—This report having been adopted, the stipulation attached to the prizes offered by the Glamorganshire Agricultural Society was taken into consideration, viz., that the subscribers to that society should be allowed to compete for those prizes on the same terms as the members of the Royal Agricultural Society. This proposal, having been moved by Mr. Randell, and seconded by Mr. Jacob Wilson, was carried unanimously, after a few words from Mr. Dent, who pointed out that this was admitting a new principle, and doing away with one of the inducements which the Society had hitherto held out to attract new members.

SELECTION.—Mr. Thompson (chairman) reported the recommendation of the committee that Mr. Rawlence, of Bulbridge, Wilton, be elected a member of Council, to fill the vacancy caused by the election of Mr. Holland as a Vice-President. This report having been adopted, Mr. Rawlence's election was moved by Mr. Thompson, seconded by Mr. Randell, and carried unanimously.

The Secretary was instructed to address letters relative to the country meeting of 1873 to the authorities of Darlington, Durham, Hull, Newcastle, and York.

The annual reports of the several standing committees were received, and the usual committees were appointed for the year 1872, with the addition of a Botanical Committee.

The report of the Council to the general meeting was prepared.

A communication from the Agricultural Society of New South Wales, in reference to a system of judging stock by points, was referred to the Stock Prizes Committee.

Letters from the Secretary of the Veterinary Department of the Privy Council, and from the Royal Agricultural Society of Ireland, in reference to the alleged diseased condition of Irish cattle imported into England, were laid before the Council, and the Secretary was instructed to forward a suitable reply to the latter communication.

THE CHEMICAL REPORT.

In his annual report, Professor Voelcker states that, whereas in the year 1870 the number of analyses furnished by him were 115 in excess of those of 1869, this year the unprecedented number of 730 analyses, or 150 more than in 1870, had been referred to him.

He calls attention to the further addition to his staff

Pybus, John, The Court Farm, Magor, Chepstow.
 Roberts, Thomas, Malthouse Farm, Lanedern, Cardiff.
 Roberts, W. B., Lovestone, Pembroke.
 Spencer, Michael, West Aberthaw, Cowbridge.
 Thomas, John, Ty Du, Cardiff.
 Thomas, John, Eastfield House, Cowbridge.
 Thomas, Rees, Saint Athan, Cowbridge.
 Till, James, Caerwent, Chepstow.

which this amount of work entails, and takes the opportunity of mentioning that his staff consists of only well-trained paid assistants, several of whom have been in his service for many years.

The following is a summary of analyses made for members of the Society from December 1870 to December 1871 :

Guano	78
Superphosphate, dissolved bones, wheat manures, and similar artificial manures	202
Bone-dust	36
Refuse manures	31
Nitrate of soda, sulphate of ammonia, and potash salts	31
Marls, limestones, fireclays, and other minerals	20
Soils	44
Oilcakes	212
Feeding-meals	24
Vegetable productions	12
Waters	36
Examinations for poisons	4
Total	730

Dr. Voelcker states that several of the samples of manures sent were found all but worthless, and he reiterates his advice that purchasers of artificial manures should always obtain, if possible, a guarantee by analysis of their composition and fertilising quantities. The practice of buying superphosphate of a guaranteed strength is, he adds, gaining more and more ground, and he recommends the stipulation that a proportionate deduction be made if the bulk of manure on delivery do not contain the guaranteed percentage of soluble phosphates.

With respect to bones, they have become scarce and dear, and few manufacturers supply genuine dissolved bones; nine-tenths of the bulk of what is sold as dissolved bones is a mixture of ordinary superphosphate with more or less of bone-dust. Such mixtures should be sold under a name which expresses more fairly the real character of the article.

Most of the samples of bone-dust analysed in 1871 were pure and of good quality.

Sulphate of ammonia has risen much in price this year, the present price being £21 to £22 per ton, and it is very necessary to have the percentage of ammonia guaranteed, which in the first quality should be 25 per cent., and in the second not less than 23 per cent.

The quality of the guano from the Guanape Islands has not improved; three-fourths of the samples of guano analysed by Dr. Voelcker were from the Guanape Islands, and the majority were too wet and lumpy for direct application to the land. Many samples contained from 23 to 24 per cent. of water, and but few more than 10 per cent. of ammonia. In former years such guano would have been sold as sea-damaged, varying according to the intrinsic value of the cargo. During the last season Guanape Island guano has all been sold at one uniform price, and importers would not allow samples to be taken of the quality of the various cargoes, so that analyses might be made before purchase. The sales of guano have consequently fallen off very much.

There is reason to believe that the Peruvian guano which will be offered in future, when the Government sales in this country are undertaken by the new contractor, will be of a superior character. The supply of good guano, Dr. Voelcker adds, is of the greater importance, because, whilst phosphatic fertilisers are being constantly discovered, and the supply from phosphatic rocks and minerals is practically inexhaustible, the sources from which ammonia can be obtained are limited. The supply therefore of guano from the Ballestas Islands, which may

be looked-for next year, and samples of which Professor Voelcker has already analysed, will be most welcome.

Ex	*Containing nitrogen		†Containing phosphoric acid		‡Alkaline salts, &c.		§Equal to tribasic phosphate of lime	
	18.91	15.67	2.82	2.70	2.16	2.44	1.75	1.83
Isaac Hall.	12.91	15.67	2.82	2.70	2.16	2.44	1.75	1.83
Dominicio.	12.27	14.89	2.82	2.70	2.44	2.44	1.75	1.83
Palmas.	13.99	15.77	2.49	2.47	1.75	1.75	1.75	1.75
Fairy Bell.	13.60	16.51	2.47	2.47	1.83	1.83	1.83	1.83
Clevra	12.14	14.74	3.07	3.07	1.83	1.83	1.83	1.83
General Shepley	13.36	16.10	2.74	2.74	1.35	1.35	1.35	1.35
British Empire.	13.20	16.03	2.95	2.95	1.29	1.29	1.29	1.29
Thomas Lord.	13.80	16.51	2.31	2.31	1.64	1.64	1.64	1.64
Crusader.	13.73	15.46	2.26	2.26	1.47	1.47	1.47	1.47
Squando.	10.75	13.05	3.25	3.25	2.84	2.84	2.84	2.84
Detroit.	12.98	15.76	2.90	2.90	1.29	1.29	1.29	1.29
True Briton.	11.98	14.54	2.39	2.39	1.59	1.59	1.59	1.59
Elize Mathilde.	12.59	15.29	2.96	2.96	1.39	1.39	1.39	1.39
Satellite.	12.78	15.51	2.10	2.10	1.69	1.69	1.69	1.69
Northumbria.	12.52	15.30	2.32	2.32	2.22	2.22	2.22	2.22
Lady Belleau.	12.97	15.75	2.36	2.36	1.44	1.44	1.44	1.44
Hertha	12.26	14.88	2.42	2.42	1.34	1.34	1.34	1.34

The accompanying table shows the analysis of 17 different cargoes of Ballestas Islands guano, an abundant supply of which may be looked forward to for a good many years.

As respects feeding cakes, the Professor again calls attention to the adulteration of linseed cake with earthen cake; and of rape cake, including green German rape cake, with mustard seed.

Five or six cases have been brought under his notice

in which decorticated cotton cake was alleged to have caused the death of sheep and lambs; as, however, some of these cakes were of a superior quality, and none of them contained any poisonous ingredients, it is Dr. Voelcker's opinion that the animals probably partook too freely of the cake, and could not digest the large proportion of nitrogenous compound contained in good cotton cake and he suggests the admixture of Indian corn or some similar starchy food.

Out of the 36 samples of water sent for examination, Dr. Voelcker found many largely contaminated with sewage, and he earnestly invites attention to the serious injury which may be produced to health by the use of such impure waters.

The following are the papers contributed by Professor Voelcker to the February and August numbers of the Journal for 1871:

1. On sugar-beets and beetroot distillation.
2. On the best mode of preparing straw-chaff for feeding purposes.
3. On field experiments on root crops.
4. On the composition and nutritive value of the prickly comfrey (*Symphytum aspernum*).
5. Quarterly and annual reports.

The following is the quarterly report of the chemical committee:—

1. Dr. Voelcker reports the analyses of three samples of guano sent to him by Mr. H. W. Hollis, Estate Offices, Keele, near Newcastle, Staffordshire, in May, 1871.

These three guanos were found to have the following composition:

	No. 1.	No. 2.	No. 3.
Moisture	7.56	7.02	15.55
*Organic matter and ammonia- cal salts	21.67	21.91	40.23
Phosphate of lime	14.85	15.34	23.06
Carbonate of lime	9.67	10.31	—
Alkaline salts	8.08	7.20	6.06
Insoluble siliceous matter	38.17	38.22	15.08
	100.00	100.00	100.00
*Containing nitrogen	4.56	5.01	9.55
Equal to ammonia	5.54	6.07	11.59

The prices of the three samples were—No. 1, £14; No. 2, £12 15s.; No. 3, £16.

The first and second samples are adulterated, for both contain as much as 38 per cent. of sand, and about 10 per cent. of carbonate of lime (chalk); and the one yields only 5½ per cent. of ammonia, and the other 6 per cent. of ammonia, in round numbers.

The composition of these two samples is pretty much the same, the second being slightly better than the first, although it was sold at 25s. less money per ton than No. 1. The third sample is genuine guano, but of an inferior character, inasmuch as it contained 15 per cent. of insoluble matter and yielded only 11½ per cent. of ammonia. Such guano is not worth £16 a ton, and the adulterated samples, No. 1 and No. 2, sold respectively at £14 a ton and £12 15s., were not worth more than £8 a ton.

Dr. Voelcker wrote for the names of the sellers of these guanos, but obtained no reply in answer to his inquiries.

2. A sample of artificial manure, sent by Mr. J. Reeve, Snetterton Hall, Thetford, on analysis, was found to have the following composition:

Moisture	13.53
*Organic matter	25.06
Oxide of iron and alumina	10.35
Phosphate of lime	1.70
Carbonate and sulphate of lime	16.74
Magnesia and alkaline salts	2.01
Insoluble siliceous matter (sand)	30.61
	100.00

*Containing nitrogen .....	.87
Equal to ammonia	1.05

This artificial manure, it will be seen, contained only 1½ per cent. of phosphate of lime, and yielded only 1 per cent. of ammonia. It contained 30½ per cent. of sand and a large proportion of oxide of iron, alumina, carbonate of lime, and similar worthless materials.

No information could be obtained respecting the names of the vendors or the price of the manure, which hardly deserves the name.

3. Mr. Edward Taylor, Whitton, Leintwardine, sent a sample of manure, which he purchased as genuine dissolved bones.

This manure on examination was found to contain no more than 10 per cent. of green loam at the most, and consequently was not genuine dissolved bones. The name of the dealer of these so-called dissolved bones could not be obtained.

4. Dr. Voelcker had previously reported on the composition of a sample of fish and bone manure sent by Mr. Nathaniel Baskett, Braines Hall, Wetheringset, Stonham, Suffolk, as follows:

Moisture	11.93
*Organic matter	8.83
Phosphate of lime	3.43
Sulphate and carbonate of lime	51.06
Magnesia and alkaline salts	2.70
Insoluble siliceous matter (sand)	21.93
	100.00

*Containing nitrogen .....	.31
Equal to ammonia .....	.37

This manure was sold at £5 a ton, but is scarcely worth 10s. a ton, delivered free of cost on the farm.

In answer to the inquiry made as to the vendors, Mr. Baskett wrote on July 6:

"You applied to me for the name of the manufacturer of some fish and bone manure I sent you for analysis a short time since, and which you valued at the low sum of 10s. a ton. I beg to state that I had it from H. Marshall & Co., Wivenhoe, Essex; also from the same firm the guano sent to you at same time for analysis, and which you stated to be adulterated, and not worth more than £7 10s. a ton, and for which I paid £12 15s.—I am, yours faithfully, NATH. BASKETT."

5. Mr. Baskett sent again in July two samples of manure, marked No. 1 and No. 4, which were both sold to him at £5 a ton cash, delivered, by Messrs. H. Marshall and Co., Wivenhoe, Essex.

The two manures had the following composition:

	No. 1.	No. 4.
Moisture	7.51	9.68
*Organic matter	16.25	11.85
Oxide of iron and alumina	1.40	.80
Phosphate of lime	2.46	5.72
Carbonate and sulphate of lime, &c.	67.15	63.46
Insoluble siliceous matter	5.23	8.40
	100.00	100.00
*Containing nitrogen .....	.44	.49
Equal to ammonia .....	.53	.59

No. 1 manure was scarcely better than the sample of fish and bone manure which Mr. Baskett sent before, and which was valued at 10s. a ton in comparison with Peruvian guano.

This manure it will be seen, contains but little phosphate of lime, and yields only $\frac{1}{2}$ per cent. of ammonia.

No. 4 is very similar to No. 1, but somewhat richer in phosphate of lime, and worth about 7s. more per ton than No. 1. Both these manures consist principally of gypsum and carbonate of lime or chalk.

6. The next case is a sample of blood and bone manure, which was sent by Mr. T. H. Saunders, Watercombe Farm, near Dorchester, who states that it was manufactured by Messrs. Festine, Brothers, near Weymouth, and sold at £5 a ton. On analysis its composition was found to be as follows :

Moisture	22.72
*Organic matter.....	19.97
†Phosphoric acid.....	1.82
Oxide of iron and alumina	11.59
Lime, carbon, and sulphate	8.85
Alkalies, &c.	5.73
Sand	29.32
	<hr/>
	100.00
	<hr/>
*Containing nitrogen.....	.88
Equal to ammonia.....	1.07
†Equal to tribasic phosphate of lime.....	3.97

This so-called blood and bone manure, it will be seen, contained only 4 per cent. of bone-phosphate, and only 1 per cent. of ammonia, and as much as 22 $\frac{1}{2}$ per cent. of moisture, and 29 per cent. of sand. Dr. Voelcker reported it to be worth not more than £1 10s. a ton, but Mr. Saunders thinks 20s. a ton.

In the course of their inquiries, the Chemical Committee frequently find that the vendor agrees to abide by the analysis of Professor Voelcker, and so, the purchaser being satisfied, there is no opportunity for further investigation. Two samples of cake, for instance, were submitted to Professor Voelcker; one, stamped pure, contained seeds of some 20 different weeds, and was made of some very dirty seed. Another contained castor-oil beans, but the purchaser wrote that he was in correspondence with the vendor, and did not wish to have any further analysis.

In presenting their annual report to the Council, the Chemical Committee beg to observe that they have had very serious responsibility thrown upon them, in consequence of the publication of Dr. Voelcker's analyses in their quarterly reports. The Committee offer their sincere thanks to the Council for the support they have received, and the confidence that has been reposed in them. They are thoroughly satisfied of the good that has been done by these publications, and they trust that, while continuing them as usual, the experience they have acquired may render the reports equally valuable to the public, and at the same time not provoke any legal proceedings.

The half-yearly meeting was held on Thursday, at noon, in Hanover Square; the president, Sir Watkin W. Wynn, M.P., in the chair.

The SECRETARY read the following Report of the Council :

The Council of the Royal Agricultural Society of England in presenting their half-yearly Report have to state that since the last General Meeting in May, 6 Governors and 53 Members have died, and the names of 33 Members have been removed from the list; on the

other hand, 1 Governor and 252 Members have been elected, so that the Society now consists of

69 Life Governors,
72 Annual Governors,
1,622 Life Members,
4,030 Annual Members,
14 Honorary Members,

making a total of 5,807, showing an increase of 198 Members during the year 1871.

During the past half year the Council has lost some of the oldest of its members, the ranks of the Trustees having been thinned by the death of Sir Thomas Dyke Acland and Lord Berners; the list of Vice-Presidents by the decease of Mr. Samuel Jonas; and the general body of the Council by the death of Mr. John Clayden. These vacancies have been filled up by the following elections: Mr. E. Holland as a Trustee, in the place of Lord Berners; Sir A. K. Macdonald, Bart., as a Trustee in the room of Sir Thomas Dyke Acland, Bart., and Mr. B. T. Brandreth Gibbs as a Vice-President, in the room of Mr. Samuel Jonas. Mr. M'Intosh, of Havering Park, Essex, has been elected to fill the vacancy in the Council caused by the death of Mr. John Clayden, and the vacancies caused by the previous elections have been filled by the election of the Hon. Wilbraham Egerton, M.P., of Rostherne Manor, Knutsford; and Mr. James Rawlence, of Bullbridge, Wilton, Salisbury.

The half-yearly statement of accounts to the 30th of June, 1871, has been examined and approved by the Society's auditors and accountants, and has been published for the information of the members in the last number of the *Journal*. The permanent funded capital of the Society remains the same as at the last half-yearly meeting, namely, £20,000 New Three per Cents., but the Reserve Show-fund has been reduced by the sum of £500, and therefore now stands at £4,112 7s. 8d.

The financial results of the country meetings at Oxford and Wolverhampton having been a loss to the Society of about £4,000, owing chiefly to the extensive and costly nature of the trials of implements, the Council have appointed a special committee to consider the whole question of the receipts and expenditure of the Society, and the possibility of securing equal results at less cost.

The extensive nature of these trials also presses with great severity on the local committees in years when land has specially to be hired for the purpose. The Council have therefore resolved that when the trials of implements at the country meetings are not held in the show-yard, one-half of the expense of providing trial-fields shall in future years be borne by the Society; but to enable the Council to know the extent of its engagements it has been stipulated that the competing localities shall state the maximum cost of the land required for the trial of implements, the acreage wanted being furnished by the Society.

The Wolverhampton meeting was distinguished from previous exhibitions of the Society by the extensive trials of steam cultivating machinery and traction engines, full reports on which have been furnished to the members in the last number of the *Journal*. Notwithstanding a long continuance of unfavourable weather, the Council are able to congratulate the Society on the practical results of these trials. They have pointed out to the agricultural communities the best combinations of machinery for the cultivation of the land by steam-power, not only by the medium of the most powerful sets of tackle, but also by means of less expensive machinery within the reach of individual farmers in districts where no system of hiring is in force. The competition for Lord Vernon's Prize-cup, offered for a set of machinery not to exceed £700 in cost, and that for the Society's prizes for sets of tackle in

which the weight of the engine was restricted, as well as for others to be driven by ordinary portable engines, produced results which will be practically useful to farmers of every class who may be desirous of cultivating their land by the aid of steam.

The trials of traction-engines were an entirely new feature, and the exhaustive report of the Engineer Judges has placed on permanent record the valuable additions which they made to our knowledge of the principles of steam-traction on common roads, and the inferences which they suggest to the practical engineer.

The competition for the prizes offered in the section of hop-machinery was not so extensive as the Council had hoped to excite, but this disappointment has been to a great extent overcome by the fact that the trials exposed to exhibitors and other implement makers many striking defects in the existing machines.

The exhibition of Live Stock did not in some cases equal that of last year, but the show of Shropshire Sheep was the largest that has ever been held under the auspices of this Society. The liberality of the Local Committee in offering Prizes for numerous additional classes of Horses did not meet with an encouraging response from exhibitors, but it is to be feared that the charges for conveyance by the railway companies have a very prejudicial effect on this department of the Society's Show. Although the Council have frequently endeavoured unsuccessfully to obtain concessions from the railway companies for the conveyance of Live Stock, and more especially of Horses, they have recently placed themselves once more in communication with the railway authorities with this object in view.

The Farm-prize competition in connexion with the Wolverhampton Meeting excited great interest in the counties of Shropshire and Staffordshire, as well as in other parts of the kingdom. A full report on the successful farms, written by Mr. Wheatley, one of the judges, has been published in the Society's *Journal*, and it is hoped that it may aid in producing results commensurate with the liberality of the landowners in the two counties in offering the first prizes, the enterprise of the competing tenant-farmers, and the careful investigation of Mr. Wheatley and his colleagues.

The series of Farm-prize competitions will be continued next year, a silver cup, value £100, having been offered by the President of the Society (Sir Watkin W. Wynn, Bart., M.P.), and a second prize of £50 by the Council. These prizes will be awarded to the two best managed farms in South Wales and Monmouthshire which shall conform to the following conditions.

- 1.—That they are not less than 100 acres in extent.
- 2.—That not less than one-fourth of the land (not including sheep-walk) is under tillage.
- 3.—That they are held (a) by a tenant-farmer paying a *bona fide* rent for not less than three-fourths of the land in his occupation, or (b) by a landowner occupying his own farm, the total extent of whose property in agricultural land (exclusive of sheep-walk) does not exceed 200 acres, and whose sole business is farming.

Nineteen farms have been entered to compete for these prizes.

The implement prize-sheet for the ensuing country meeting to be held at Cardiff has received the careful attention of the Council; and prizes have been offered for portable steam-engines, thrashing machines, straw and hay elevators, corn serecons, corn dressing machines, and seed drawers. The regulations of the trials and the instructions to the judges have been revised, especially in reference to the points representing perfection in thrashing machines: and further restrictions have been imposed on exhibitors with a view of keeping the exhibition of implements within moderate limits.

The regulations affecting the awards of medals to miscellaneous articles have also been once more under the consideration of the Council, and such modifications of them have been introduced into the Cardiff prize-sheet as will insure that the medals are awarded either to implements belonging to the classes to be tried at that meeting, or to those which have an entirely novel construction, and which are not included in the Society's classification.

The Council have renewed the education grant for the year 1872, on the same conditions as were attached to the examinations this year, feeling that more time must elapse before the advantages arising from success at these examinations can be generally appreciated.

Since the commencement of the publication of the quarterly reports of the consulting chemist, the number of analyses made by Professor Voelcker have increased during 1871 by 150 in excess of those made in 1870, and 265 over those of 1869; and the Council are satisfied that the publication of these quarterly reports has caused agriculturists more to appreciate the value of chemical research, and has aroused a spirit of inquiry in this department of agriculture, which cannot fail to produce very satisfactory results. They trust, therefore, that the continuation of the publication of these reports of the consulting chemist may not be less advantageous to the members of the Society than they have hitherto been.

The Council have to announce that they have appointed Mr. W. Carruthers, F.R.S., chief of the national botanical collection of the British Museum, to be the consulting botanist to the Society. In making this appointment the Council have endeavoured to secure the services of a competent botanist, whose duty it will be to examine plants, seeds, &c., for the members of the Society; to report on the principal work performed by him during each year; and from time to time to furnish papers to the *Journal* on special subjects of botanical interest. The following schedule of charges has been provisionally fixed by the Council for the examination of plants and seeds for the use of members of the Society:

No. 1.—A general opinion as to the genuineness and age of a sample of cloverseed (each sample)	5s.
2.—A detailed examination of a sample of dirty or impure clover-seed with a report on its admixture with seeds of dodder or other weeds (each sample)	10s.
3.—A test examination of turnip or other cruciferous seed, with a report on its germinating power, or its adulteration with 000 seed (each sample)	10s.
4.—A test examination of any other kind of seed or corn, with a report on its germinating power (each sample)	10s.
5.—Determination of the species of any indigenous British plant (not parasitic) with a report on its habits (each species)	5s.
6.—Determination of the species of any epiphyte or vegetable parasite, on any farm-crop grown by the Member, with a report on its habits, and suggestions (where possible) as to its extermination or prevention (each species)	10s.
7.—Report on any other form of plant disease not caused by insects	10s.
8.—Determination of the species of a collection of natural grasses indigenous to any district on one kind of soil (each collection)	10s.

The prevalence of foot-and-mouth disease in English herds has induced the Council, on more than one occasion during the past half-year, to draw the attention of the Government to the existing regulations in reference to the importation of both foreign and Irish cattle, and to

the restrictions which it is desirable to impose in order to diminish the risk of their conveying contagious or infectious diseases to English stock. The correspondence between the Veterinary Department of the Privy Council and the Secretary of the Society, together with a *précis* of the various acts and orders in Council relating to the importation of foreign animals, has been published in the last number of the *Journal*; and, with regard to Irish stock, the Council have received the assurance of the Government that measures are being taken which, it is hoped, will be found satisfactory.

The existence amongst lambs of a wide-spread disease of home origin, has been brought under the notice of the Council by the Lincolnshire Agricultural Society, during the past half-year. The nature and origin of this disease have been previously described in the *Journal* of the Society, but in view of the great losses which it has this year caused to Lincolnshire flockmasters, the Council have requested Professor Shirds to make a thorough and immediate examination of the nature of the disease and the circumstances under which it most commonly occurs, and to give suggestions for its treatment and prevention.

The relations between the Royal Veterinary College and the Society are still under discussion by the governing bodies of the two institutions; but the Council are still hopeful that the result will be to extend the usefulness of the veterinary department of the Society in accordance with its increasing importance to the English agriculturist. In consequence of the death of Professor Spooner, the post of principal of the Royal Veterinary College is now vacant; and it is possible that alterations may be made in the staff and course of study at the College. Under these circumstances the Council have postponed its decision on the relations of the Society to the College.

By Order of the Council,
H. M. JENKINS, Secretary,

The CHAIRMAN said it would be seen from the Report that the number of members was increasing, and he trusted the Society would continue to prosper. The financial results of the Wolverhampton meeting were not quite as successful as could be wished; but it was impossible to provide suitable ground for the trial of the steam ploughs without incurring enormous expense. In agriculture, as in other things, everything had now to be carried on upon a large scale when the object was to ascertain experimentally how the greatest results might be secured at the smallest cost. He believed that the money expended at Wolverhampton had been well laid out; that the effect was likely to be appreciated throughout the country, was shown by the fact that the tenant-farmer in Stafford, on whose farm the steam trials took place, had purchased the set of Fowler's steam tackle which won Lord Vernon's prize. There was a man who, having seen the advantages and disadvantages of the machinery employed, was led to become its purchaser, and there could be no better proof of its value. They must all regret that the weather during the Wolverhampton week was such as to prevent many of those who were called holiday folks or sight-seers from attending the Show. Having been present himself he could declare that he never saw ground in a heavier condition, or more difficult to get across. He wished to lay before the meeting a few interesting facts connected with the question of the adulteration of manures, the information having been supplied by Dr. Voelcker. In 1871 Dr. Voelcker made 730 analyses for members of the Royal Agricultural Society, amongst which were 78 guanos, many of an inferior character, and not a few adulterated; 202 superphosphates, bone manures, and other artificials; 36 samples of bones; 31 refuse matters, such as shoddy; 31 nitrate of soda; 212 oilcakes; 24 feeding meals. Manures sold at £5 were found to be worth only 10s. a ton, and others worth the cartage to the field. Some of the oilcakes caused the death to valuable animals, and were found to be mixed with

downright poisonous substances. Since the publication of the quarterly reports of the Chemical Committee the number of analyses for members has increased nearly by 300, and in the last five years the analytical work has been more than doubled. He might add, with regard to the law-suit in which the Society had been engaged during the past year, and which ended in a compromise, that the Council did not stop because they were at all inclined to shirk their duty, but because Counsel thought it advisable that they should do so. The question of railway accommodation for the country meetings of that Society was one of great difficulty, though, generally speaking, the railway companies with whom they had had to deal had been enabled to recoup themselves for any additional outlay by increased traffic. After that meeting had terminated he was going to Paddington, with the Secretary, to see whether better arrangements than those adopted recently could not be made for the meeting at Cardiff. One word with regard to foot-and-mouth disease which now prevailed so extensively throughout the country. The officers of the Society had been in communication with the Committee of Council on that subject, and the question was under the consideration of the Council meeting held last month. The condition of the Irish boats employed for the conveyance of cattle had been under their consideration. It was their wish that those vessels should be examined in the same way and subject to the same conditions as regards cleansing and disinfection as foreign ones, and he hoped that the Government authorities would give directions to that effect. Trusting that the meeting would excuse him for having taken up so much time, he would now remind those present that they might introduce any subject that was connected with this report which was consistent with the charter and not political (cheers).

Mr. W. BOTLEY, in moving the adoption of the Report, said that after the excellent prefatory remarks of the Chairman it could not be necessary for him to say much in performing that duty. The Report seemed to him, on the whole, of a very satisfactory character, and, as regarded the two or three subjects for regret, no fault rested with the Council; while, if they were not so successful in a pecuniary point of view as could be desired, the £20,000 invested in Government securities, as reported at the last half-yearly meeting, still remained intact. The opening paragraph of the Report showed that they had good cause to congratulate each other on the increase in the number of members. Some time ago it was remarked that the number of members ought to be at least doubled, and he entirely concurred in that opinion. There was, however, a steady improvement in that respect, and considering, among other things, how much more readable the *Journal* had become than it was a few years ago, and how many articles it contained of great general interest to farmers, he could not doubt they would continue to improve (cheers). As regarded the prizes for hop machinery, he might remark that as that was quite a new feature it was not to be expected that the result would be more satisfactory. No one could have read the accounts given in the *Journal* of the prize farm competitions without feeling that the results were exceedingly satisfactory, and it was clear that the prizes offered for the best farming tended greatly to the advancement of agriculture. Several years ago he advocated the encouragement of education among farmers by that society, and he was glad to find that the Council had renewed the education grant for 1872. Having recently seen some of the results of sewage irrigation on the farm at Aldershot, and on another farm, he must say they were most extraordinary. On the 4th of November he saw men cutting rye grass for the fifth time this year at the rate of 16 tons per acre, and it appeared that on some of the best parts of the land which he saw no less than 90 tons of rye-grass had been cut within the present year. The land also produced excellent carrots and potatoes, and out of seven acres of the latter there were only about three bushels diseased. The cost of that kind of cultivation was necessarily very great, the manager of one of the farms which he visited stating that it amounted to about £40 per acre; but, notwithstanding that large expense, the results were remunerative.

Professor COLEMAN, in seconding the resolution, said he considered the Report to be most satisfactory, as showing that the members of the Council were anxiously endeavouring to keep the Society up to the mark in the progressive age in which they lived (Hear. hear). The recent financial loss has no doubt in one sense to be regretted, but, on the other hand,

he believed that the money expended on the shows was admirably laid out, and conduced to the advantage of agriculture and of the country. He trusted the Finance Committee would not feel discouraged even if the next show entailed some loss, and he felt certain that the approaching meeting at Cardiff would leave its mark behind in the Principality (Hear, hear). He congratulated the Society on the liberal and handsome prizes offered by Sir Warkyn Wynn, as a continuation of that new feature the farm prizes (cheers). Considering that Cardiff was—he did not wish to use these words disrespectfully—somewhat out of the world, he thought that feature would be a matter of special interest at the meeting. He attached great value, in a practical point of view, to the reports on the farming competitions which appeared in the Society's *Journal*.

Sir J. H. MAXWELL could not help congratulating the Society on the course pursued by the Council with regard to the adulteration of manures, the great object being to protect tenant-farmers against sham guano merchants. There would, of course, always be both rogues and fools in that case as in others, but he was happy to say that the number of respectable guano dealers and manure importers were increasing, and he believed that that, combined with the action of the Council, would put an end to an evil which had been a very serious one to the cause of agriculture.

Mr. NEILD would have been glad if the financial statement had shown how much of the £4,000 loss was incurred at Oxford, and how much at Wolverhampton. He thought that each show should stand on its own merits, because in the one case there were natural causes, and in the other there were causes which had often been in his own mind to account for the loss. He knew he was on delicate ground when he mentioned anything approaching trials of horses, and that he should be exceedingly at fault if he spoke of leaping prizes; but one thing which must commend itself to that Society was the result of the judicious and practical course pursued in that respect at Liverpool. At the Liverpool show there were trials of both driving and draught agricultural horses, and the greatest interest was manifested. He was forcibly impressed with what was said in the Report respecting the adulteration of manures and of cattle food. He believed that if ever the day arrived when farmers had fair-play with regard to malt, and could feed their stock with malt of their own growth without its being taxed, that change would sweep off, as it were, half the remaining adulteration, while it would at the same time confer great benefit on the community in general. He believed that if malt were made free to the farmer, the price of beef would be 1d. per lb. lower within a twelvemonth. As to the railway arrangements for Wolverhampton, he must say that their niggardly and beggarly character seemed to him a disgrace to that part of England. The result of such a state of things might be that that Society would presently be compelled to hold all its meetings in two or three central places; but he congratulated the meeting on the prospects of the Cardiff meeting, and would add that his Welsh friends had assured him that it would be a bumper.

Mr. ARKELL would suggest that in future farmers should send all the particulars to the secretary, stating of whom they purchased manures, the cost price, and so on, and that the sample should be handed over to Dr. Voelcker for analysis without his being told where it came from or anything which could tend to prejudice his mind. He feared that it was only in that way that the practice of adulteration could be exposed to the full extent required; and he hoped, therefore, the Chemical Committee would take his suggestion into consideration. As a rule rogues were very bold and honest men very timid (laughter). The last paragraph but one in the Report referred to the wide-spread disease among lambs. On that subject he had to suggest the appointment of an entomologist. It was agreed on all hands that the disease which prevailed among lambs, as well as among horses, was caused by a small red worm in the gullet and pipe. The existence of that worm could be easily discovered by a veterinary surgeon, but an entomologist was required to trace out the cause. There was great difference of opinion as to whether the worm was picked up on the land, in sheds and stables, or by over-feeding; but farmers had to cultivate their land and produce stock at great expense, and when they got to about seventy they knew how to live (laughter). He well recollected reading the articles of Mr. Curtis in some of the earlier numbers of the *Journal*

with regard to the various insects which destroyed crops; but after Mr. Curtis' death that subject went to the dogs; there had been nothing worth reading since, and he thought the labours of an entomologist would prove of great service to agriculturists. At present no one seemed to know how the parents of the worms got into the pipes of lambs. He hoped the Council would deal with that question in such a manner as to entitle them to increased confidence from farmers as a body.

The Report was then adopted.

On the motion of Col. Challoner, seconded by Mr. Kimber, a vote of thanks was given to the auditors.

Mr. TORR, in moving the re-election of the auditors, said the expenditure on the steam trials at Wolverhampton seemed to him perfectly justifiable. Such trials inevitably cost the Society a large sum of money. They could not work steam machinery with hundreds, but must spend thousands upon thousands. A paragraph in the Report referred to the prevalence of disease among lambs in Lincolnshire. He himself had lost 100 lambs; but that was a mere fraction of the aggregate loss. The disease had extended to almost every county in England, and must not be regarded as having a special tendency to develop itself in Lincolnshire. Having been instrumental in bringing the subject before the Council of that Society, on the previous day he formed part of a deputation of six or seven Lincolnshire farmers who had an interview with Professor Simonds in relation to it. In that interview the Professor gave them an elaborate, sensible, and clear definition of almost every worm in existence, and told them how they affected sheep; and when he (Mr. Torr) had returned home he was to send him some of the grasses and of the earth in which those worms existed in a parasitic form. It was difficult to find out their haunts, as they were on some farms continually and on others only occasionally; but the Professor thought that they existed in a parasitic form in winter, and reappeared in the spring. He also said that they were taken up by lambs in such minute forms that they could hardly be discerned even with the aid of a microscope. Their existence was known, but the great object was to trace them out, and to begin early enough in the spring to detect them where they existed as parasites ready to develop themselves into the worm, so that the worm would become an animate instead of a dead substance. Such was the great object of inquiry; and as the Council of that Society had been liberal enough to make a grant for the expenses, he would engage that in Lincolnshire they would lose no time in doing their part towards discovering the source of the evil, acting on the broad principle that while benefiting themselves they would also benefit the nation.

Mr. LIDDELL, M.P., having seconded the motion, it was put and carried.

The CHAIRMAN having then, in conformity with custom, invited the members present to offer suggestions for the consideration of the Council,

Sir J. H. MAXWELL wished to say one or two words in allusion to the regret expressed that the members of that Society were not more numerous. At the last meeting he observed that he thought the Scotch Society had succeeded better in that respect, and that there was a large proportion of tenant-farmers. In order to obtain definite information on that point he had written to the excellent secretary of the Society to which he referred, and he would read the following extract from the reply: "In 1850 we had only 2,700 members on our list, only 239 of those being tenant-farmers, nearly all of them life members. In that year it was resolved that tenant-farmers should be admitted on a subscription of 10s. per annum, or £5 5s. for life, instead of £1 3s. 6d. per annum, or £12 12s. for life—the ordinary rate. The number of tenant-farmers is steadily increasing. We have now 4,033 members of all classes, and 1,784 of these are tenant-farmers. In 1861 we had 1,541 tenant-farmers; in 1866, when I became secretary, we had 1,684; and in 1871 we have 1,784. I have no doubt it has benefited this Society as well as the country, reducing the subscription to tenant-farmers; so much so that I have induced the Society to add a number of other classes to the same list."

The CHAIRMAN said he understood Sir John to throw out the suggestion that the Council should consider whether any means could be devised for popularizing the Society a little more.

Sir J. H. MAXWELL: Yes.

Mr. WELLS said as chairman of the Chemical Committee he wished to remark that he had felt great pleasure in listening to what had been said respecting the analyses made for the members. He must confess that he had been a little afraid lest they should be rather severely criticised at that meeting on account of the legal expenses which had been recently incurred (No, no). If mistakes had been committed it was certainly through no want of industry or care on the part of the committee. There had generally been very full meetings; everything had been done by them which seemed likely to ensure success; and he was glad that the course which they pursued met with the approval of the members. Mr. Arkell's suggestion should have due consideration, but he thought there would be some difficulty in the sending of manures in the first instance to the Secretary instead of Dr. Voeleker.

Sir G. JENKINSON, M.P., alluding to what had been said respecting the number of members, said that he himself had pointed out to tenant-farmers the advantages arising from membership, especially as regarded early admission to the exhibitions, and he believed that if others pursued a similar course, that would lead to an accession.

The SECRETARY wished to observe that the proportion of tenant-farmers to other members was far larger in the case of that Society than in the case of the Highland Society, and that the members of the latter were not entitled like those of the former to the privileges of chemical analysis without any addition to their annual payment.

Sir J. H. MAXWELL, in moving a vote of thanks to the Chairman, said he was always glad to see an old agricultural name connected with the Presidency of that noble Society, and expressed a hope that Sir Watkin would witness a great success at the approaching meeting in Wales.

Col. CHALLONER, in seconding the motion, spoke of the care and attention bestowed on the Society's affairs by the Chairman ever since he became President.

The motion having been put by Sir J. H. Maxwell, and carried by acclamation,

The CHAIRMAN, after returning thanks, said it was not to be expected that the Cardiff Show would bring as large an attendance as some others had done, as it would not be in so central a position; but it would be held in a very important part of Wales, and would he trusted prove satisfactory. It was very important to show how the largest amount of food could be grown on the smallest extent of land. There was a large class of men in Wales who farmed their own land, as their ancestors had done for generations, and who were very little removed in point of income and capabilities above tenant farmers, and he had suggested that such persons should be allowed to compete on the same conditions as others, not intending to include in that privilege those who farmed merely for amusement. He was very glad to hear the suggestions which had been made that day, particularly those that chiefly concerned the Chemical Committee, which had been engaged in exposing those who had for years been in the habit of—he would not blink his meaning—robbing the farmer. They all knew that the farmers of England were a little too fond of buying in the cheapest market. It was the business of the Council to try and protect them; and although in endeavouring to do that they had incurred a loss of about £600 in the case which had been mentioned, yet he did not grieve from what he had heard that the meeting disapproved of the manner in which the Society's money had been expended.

The meeting then separated.

HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

At the December meeting of the directors, Major Ramsay, and afterwards the Marquis of Tweeddale, in the chair—

The board agreed, on the suggestion of the Chemistry Committee, to offer a premium of £50 for a report on "What has Chemistry done for Agriculture by Improving or Increasing the Produce of the Soil?" A suggestion originating from the Chemical Committee that the Society should establish a model farm was remitted to the committee, their proposal not being yet matured.

The report by the Committee on the Transit of Animals by Railway was submitted. It embodies the whole proceedings of the Society from the time the subject was first taken up by the directors in 1867, and proceeds as follows: "After carefully considering the documents submitted, and the Act to which the Order of Council has reference, the committee beg to recommend that the board should again communicate with the Lords of the Privy Council, through Dr. Alexander Williams, specially pointing out—1. That the Order of Council (300) called "The Transit of Animals Order of May, 1870," for providing trucks with spring buffers and supplying water to animals carried by railway, is not only systematically evaded, but is defective in respect that provision is not made for supplying animals with food; and that a new Order of Council is urgently called for. In the new Order it should be specially provided—(1) That animals should be supplied with water when trucked and untrucked; and during the journey both with food and water. The necessary food to be provided by the owner of the animals, the water by the railway company. The Act says that if animals are allowed to be in trucks without water for a period between twelve and thirty hours (to be fixed by the Privy Council), the railway company will be guilty of an offence. A rule of the same kind should be adopted for food against the owners. (2) That in addition to the spring buffers stated in the Order of Council (300), it is absolutely necessary to provide covered waggons, closed at the ends, and 18 inches along the sides from each end, with an arrangement of troughs for the proper supply of the animals with water, and racks for supplying hay in the trucks during the journey. II. That many important railway stations where animals are trucked and untrucked are not included in the schedule at-

tached to the Order of Council (324) called "The Transit of Animals (Water) Order of March, 1871." (Here follow the list of additional stations suggested; but the committee consider that should the Privy Council issue an order that water be supplied in the trucks, it will not be necessary to have it at all the stations enumerated). The committee further suggest that should the Privy Council not give effect to the representations proposed to be made to them, an influential deputation should be formed to wait on their Lordships. The report was approved of by the directors.

The following report upon the trial of Fiskens steam cultivating machinery, which took place on the Marquis of Tweeddale's home farm of Yester Mains during the week ending 11th November last, prepared by Mr. Swinton, Holywell Bank, Gifford, was submitted to the board:—

Lord Tweeddale being desirous to see this system of steam cultivation at work, and to give the agricultural community an opportunity of inspecting it, arranged with the Ravenshorpe Engineering Company of Mirfield, near Leeds, to send the patented part of the machinery to Yester, and hired from Mr. David Roughead, Myreside, a traction engine and balance plough, made by John Fowler and Co., of Leeds. This engine is stated by Messrs. Fowler and Co. to be of fourteen horse-power, but several practical engineers who saw the engine at work expressed doubts about the engine being of this power, and the price paid by Mr. Roughead for it (£420) indicates a smaller horse-power, although Mr. Roughead states he got a good bargain of it. Mr. Roughead has used this engine for over three years, in working a set of roundabout tackle on Howard's system. The only alteration which this engine required in order to adapt it to the Fiskens tackle was the fixing of a grooved rim on the flywheel to receive the driving rope. The plough hired from Mr. Roughead was one of Fowler's ordinary balance four furrow ploughs, but with mould boards made according to a pattern of Mr. Roughead's. This plough was only adapted for a furrow not exceeding 9 inches deep, and had to be considerably altered to enable it to turn a 14-inch furrow. This it did not do very satisfactorily, and a trial was made to fit on mould boards of the common horse plough in use at Yester, but as the head of the plough and the mould

board were not adapted to each other, the furrow was not so well turned as it might have been. The Fisken tackle is not, however, in anyway answerable for deficiency in the quality of the ploughing, as this was wholly the fault of the plough. The field to be ploughed contains 75 acres, and had been under a crop of oats in 1871, and was wished to be deep ploughed in preparation for a crop of turnips in 1872. The part of the field operated on consisted of soil of various kinds, from stiff clay to sand and gravel, and a narrow hollow or glen passed through it into which the plough had to descend and ascend at each turn across the field. This part of the field was chosen in order to test the working of the machinery on uneven land. The field had during several previous rotations, been ploughed by horses to a depth of from 14 to 16 inches and all the large stones removed. A full description of the Fisken method of steam cultivation is given in the pamphlets issued by the patentees and makers of the apparatus and need not be here repeated. The Fisken tackle, consisting of 2 patent windlasses, 6 corner anchors, 1 tension anchor, 30 light rope porters, 2 claw anchors, 2 rope porters for steel rope, 2 wood levers, crowbars, and tools, 1,200 yards of hemp driving rope, 800 yards steel rope, 100 yards steel rope for anchors, and weighing in all about 8½ tons, arrived at Had-dington Station on Saturday, 4th November, and required 9 horses and 2 carts to convey it to Yester, six miles. The windlasses were set down in the field near their position for work, and a portion of the field 400 yards long and 200 yards wide, and containing about 16 acres, was marked off, and the anchors and porters for the driving rope were set up round about it. The engine and plough arrived in the field on Monday, November 6, and about three o'clock on the afternoon of that day commenced to plough. Several hours were spent in getting the engine into position, in consequence of the wheels having sunk in the soft headland, which was very wet from the heavy rains on the previous days. Tuesday, 7th November, was spent in making sundry alterations on the plough, and adjusting some parts of the Fisken tackle which had not been properly fitted. Wednesday, 8th November, the tackle was fairly started this morning, and the number of people employed was as follows:—1 engine-driver, 2 windlass men, 1 ploughman, 1 lad at wire rope porters, 1 man and horse driving water to engine, 1 man and 2 horses driving coals (eight miles). Not long after the starting the bearing of the pulley of the corner anchor, nearest to the engine on the tight rope, became heated, and the anchor had to be removed and another one substituted. About three hours after starting, the small pinion on the first motion of the patent windlass stuck fast on the shaft on which it runs loose when not in gear. The work had to be stopped and part of the machine had to be sent to the blacksmith's shop to be adjusted and the shaft ground, thereby causing a delay of three hours. Both of these stoppages occurred through sufficient provision not having been made for lubricating the bearings, and can be very easily remedied. With the above exceptions, no faults or deficiencies were observed in the patent tackle while at work at Yester. It was, however, remarked by several persons conversant in such matters that the bearings of the corner anchors, and also of the patent windlasses, would be improved by being lengthened, so as to spread the pressure over a greater surface; and that better provision for lubrication was required, as most of the bearings are vertical. Lord Tweeddale having required the land to be ploughed 14 inches deep, which is the depth ploughed by three horses at Yester, the balance plough was altered accordingly, so as to plough three furrows of the required breadth and depth; and although the land was not so well turned as was desirable, still the soil was moved to the depth required, except where the land was light and gravelly on the slope of the glen or hollows, where the tendency of the plough was to throw out of the ground. On several occasions, and in order to test the strength of the tackle, the plough was loaded with men and forced into the stiff clay so as to stop the engine. No breakages occurred. It was found that with three furrows 14 inches deep, one hour was required to plough an imperial acre, with the steam gauge of the engine, showing a pressure of eighty pounds of steam per square inch. On Saturday, 11th November, the work was inspected by the Directors of the Highland and Agricultural Society, the Steam Plough Committee of the Society, and several other gentlemen. The registering dynamometer of the society was in the field, but in consequence of

the non-appearance of Mr. Slight till late in the afternoon there was not sufficient light properly to apply the dynamometer. This is much to be regretted, as there is no record of the power expended in dragging the plough, or the driving rope and windlasses without the plough. At the desire of the directors the tackle was removed and set to work in a different part of the field. The engine moved itself to its new position. Three horses were required to move the windlasses, and two horses and carts to move the anchors, porters, and other apparatus. The time occupied in this removal was one hour and thirty-five minutes from the time of commencing the removal till the plough was again at work. Some delay was caused by the coiling up of the hemp-driving rope on the reel, which, instead of being on the engine (its proper place), was temporarily fixed on a cart. The engine driver, who has had charge of Mr. Roughhead's engine for the last three years, states that the power required from the engine to drive the Fisken tackle is as near as possible the same, and certainly not more than is required to work the tackle on Mr. Roughhead's farm, and that the consumption of coal and water was also the same. The engine was found to consume 2½ cwt. of coal and 16 cwt. of water per hour. The coal was got from Fountainhall colliery, and though not of the best quality of steam coal, is the coal commonly used for engines in this part of the country. The oil and tallow required for the lubrication of the windlasses, anchors, and porters, after these got into proper working order, was 1 imperial pint of sperm oil per day, and about 1 pound of tallow per week. The working strain on the hemp-driving rope is said to be a fourth part of the strain on the wire rope which drags the plough, so that, supposing the strain on the wire rope with the plough turning 3 fourteen-inch furrows to be 25 cwt., the strain on the driving rope would be 2 cwt. The driving rope when new will stand a strain of 20 cwt., and the wire rope 14 tons. The working of the Fisken tackle during the week it was employed at Yester was very closely watched, and after the tackle was fairly started, notes of everything that occurred were taken. The only defects observed in the tackle were those already mentioned. They were easily remedied, and with a little more care in manufacture would not have occurred. The management of the windlasses is apparently within the capacity of any ordinary working man, and the facility with which these can be put into and thrown out of gear, and the plough thereby stopped, without communication with the engine driver, seemed to have reduced the danger of any accident almost to a minimum. The use of the friction clutch for setting the windlass in motion is also considered a great advantage, as the risk of breakage from the plough coming in contact with setfast stones, is much reduced. The tackle was examined by many practical agriculturists during the week, and they were unanimous in expressing their approbation of the apparent suitability of the tackle to perform the work required of it. It is to be hoped that the eminent consulting and practical engineers of the Highland Society will express their opinion as to the mechanical arrangement adopted on this system, and as to the probable endurance of the windlasses and other parts of the machinery. No statement of the cost of working the Fisken tackle has been given here, as this must vary very much according to the rate of wages paid in different parts of the country, and the distance from coals and water. Nor has any comparison been made as to the economy or advantage of this system in comparison with any other, as there has not been sufficient experience of it to warrant any such comparison. An attempt was made to have another system of steam cultivation at work in the field, in order to contrast this system with another, but in consequence of the conditions laid down by the agent of the other system, it was found to be beyond the means of a private individual to conduct such a trial as he insisted on, and Lord Tweeddale is of opinion that such a trial could only be carried on in Scotland by the Highland and Agricultural Society.

The board instructed the Secretary to convey the thanks of the Society to Mr. Swinton for his able report, and to communicate with Professor Macquorn Rankine and Mr. Slight, with the view of getting a report from them of the mechanical arrangement, and to the probable endurance of the windlasses and other parts of the machinery adopted in Mr. Fisken's system.

A committee was named to read and report on the papers

ldged for Lady Burdett Coutts' prizes for essays on the most efficient method of inculcating in primary schools the duty of humanity to the lower animals. Mr. Menzies reported the forty-three essays had been received.

A communication from the Secretary of State for India, addressed to the president, requesting the Society to forward direct to the Government of India such papers and information as may be published by the Society so soon as they are

issued, and also to direct the attention of the Government of India to such points as may be deemed useful for them to be acquainted with, was laid before the board. The secretary reported that a similar application had some time since been made for the Transactions on behalf of the agricultural department of the India Government of Calcutta, and that a complete set of the new series had been forwarded in November last, which had been reported to the India board.

THE LAND QUESTION IN WALES.

At a meeting of the United Counties Chamber of Agriculture held at Carmarthen, Mr. J. L. G. P. Lewis, of Henllan, in the chair,

Mr. B. T. WILLIAMS, M.A., of the South Wales Circuit said: In coming here to address you, the landowners of these counties, upon the land question, I feel that I occupy a position in which I must claim your indulgence. I tread upon dangerous ground.

Incedo per ignes
Suppositos cineri doloso.

But while I claim from you full liberty to express my opinions, however much they may differ from your own, I promise you impartially to consider the views which you will advocate after I have done. The political writers, who are now seeking to direct public attention to what is termed the "Land Question," may be divided into the usual two classes of extreme and moderate. The views of the extreme class imply either the confiscation of all rights of private property in land, or the purchase by the State of such rights for the benefit of those who have no land at present. Those views are mischievous because they instil into the minds of the working classes notions that they may make themselves rich by political agitation, whereas all that the State can do for any class in this country, is by destroying monopolies and favouritism, to give it a fair chance for the exercise of its skill, enterprise, and virtue. Their views are also impracticable and need not therefore be discussed by me here. English common sense will never sanction confiscation, and is not likely to adopt its modified form of purchase by the State, which, in truth, means the enrichment of one class out of the pockets, although indirectly, of another. The views of the moderate school are put forward by Mr. John Stuart Mill and his Land Tenure Reform Association. Their programme contains some suggestions that are good and well worthy the attention of law reformers. It also contains others that are unjust and dangerous. Mr. Mill's treatise upon the land question is well worthy of a moment's consideration, not only on account of its distinguished authorship, but also because it is fairly indicative of the plan of reform which is now urged upon the attention of the people by a school of reformers. There are one or two points in their programme about which you, as well as myself, may justly have some hesitation. It is rightly assumed that land increases in value every year. Now, Mr. Mill thinks that as a great part of this increase is due not to any effort or outlay by the proprietors, but merely to the growth of population or wealth, it should be intercepted or secured for the benefit of the State. When this principle is to be applied to landowners, Mr. Mill is good enough to suggest that if they do not wish to submit to it, they may be allowed to relinquish their property to the State at the market value acquired at the time. This appears to me the most unjust and impolitic proposal that has been submitted to the people by a public man for many years. Railway shares, consols, and all properties of which a man may be possessed, may and frequently do rise in value without any effort or outlay on his part. The likelihood of this taking place is the reason why he invests in some securities in preference to others. Above all men the landowner, especially if he is a poor man, submits for years to the inconvenience of poor returns, often at a miserable interest of 2 per cent., in the fond hope that in future years his children by the increase of the value of his estate will be repaid for his self-denial and forethought. If this principle is to be applied to any investment, why is it not applied to all? Further, if the State takes the profit, will it also take the loss? "Qui

scilicet commodum sentire debet et onus" is a maxim of our law and of universal justice. A landowner, after the efforts and outlay of years, may find his estate diminished in value. He may discover his plans fail. The flow of wealth may be directed to other districts. It is only a just part of the bargain that the State should pay him for his loss if it is to stand by, waiting to seize any increase in his profits. If such a proposal were ever adopted, it would check enterprise and stop improvement by taking away the strong incentive to both. It is patent, therefore, that it is as impolitic as it is unjust, and I think I may also say that it is as impracticable as either. I will not refer to the alternative of selling their land to the State, which Mr. Mill is good enough to offer to those landowners who refuse to submit to this injustice. The State has no right to compel a man to adopt a course which he does not voluntarily select by threatening to do him a wrong. The next proposal made by Mr. Mill to which I shall refer, is that all waste lands and commons that require an Act of Parliament to authorise their enclosure shall be retained for national uses, compensation being made for manorial rights and rights of common to those who are now entitled to them. This proposal is made for a good object. The land that is actually lying waste in this country ought to be made productive. The nation with its millions struggling for bread cannot afford to allow means of profitable employment and of increased wealth to lie undeveloped. If Mr. Mill had inaugurated a movement for the compulsory enclosure of commons, he would have done a good act. As matters now stand, the enclosure of commons is a cumbersome and expensive proceeding. Rights in some districts are supposed to be imperfectly ascertained, and a fear of legal dispute encourages delay. Consequently, a person is not easily found who will take the initiative in the enclosure of commons. The result is, that notwithstanding our surplus population and the high price of land, large tracts of country are allowed to lie useless and unproductive. If Parliament took this matter up with a strong hand, and made the enclosure of commons obligatory throughout the United Kingdom of Great Britain and Ireland, a new and large field of industry, enterprise, and investment would open up before the people. But there is a fallacy and also a wrong in Mr. Mill's word "retain." The commons and waste lands of the country are not now vested in the State, and are not the property of the State, but of the various lords of manors, and of those who have rights upon the same. If the State wishes to possess itself of the commons and waste land she must buy them of their present proprietors at a cost which with reference to their present value and future contingencies may be just. This suggestion and some others to which I need not refer are based upon the desire that Mr. Mill and his friends have to increase the class of small proprietors. How far is this desirable? How far is it possible? I have no hesitation in saying that the interest of the nation is greatly concerned in preserving the race of small landed proprietors. The country has so far supplied England with its best men—with those who were strongest in mind and body, and bravest in heart. If I belonged to the Conservative party, I should watch with jealousy and regret the decay of a class of men who have been the most hearty upholders of English institutions, principles and prejudices. But, however much we may wish to preserve the race of small landed proprietors, there are now laws of political economy in operation, which, subject to one qualification, are making their gradual extinction inevitable. The price of land increases every year. It returns the lowest percentage. The local charges of rates and tithe-rents are burdensome. The consequence is, that a poor and small landed proprietor

cannot afford to give up the advantages which a sale of his estates would bring to himself and his family. I think I may say that every landowner in this room, who is not a farmer of all the land that he owns, holds his land at an annual loss to himself. If he brought his land into the market, he would obtain such a sum of money for it, that would with perfectly sound investments return him a much larger income than that which he now gets from his tenants, and that would give him a surplus over, far more than sufficient to compensate him for the yearly increase in the value of his estate. Rich men cannot afford to make this sacrifice for position, for sentiments, love of home and old traditions; but the poor man must submit in the long run, and must endeavour to get the most he can for his money. I refer now to those who hold land as an investment, and not to those who buy land for the purpose of farming it and improving it themselves. I hold the freeholding farmer still to be in a hopeful position. If he farms well, he may yet hold his own against the encroachments of our large landed monopolists, and preserve to this country the traditions and character of a class of brave and useful men. The legal changes proposed in the tenure and transfer of land are well worthy of consideration. We have a relic of the law of primogeniture in the rule that when a person dies intestate, his eldest son succeeds to the whole of his real estate, to the exclusion of all other claims, however near and dear. The feudal notion of giving all the land to the eldest son has firmly rooted itself in the Welsh national mind. It is acted upon by the squires as well as by the small landed proprietors. The rule may be defended upon some grounds of public policy, but upon no principle of social justice and right. I trust in time—although the day now appears to be far off—that the conscience of the nation will be educated out of this feudal wrong and that all traces of its influence will disappear from our wills and deeds. In the meantime, the law ought to set a good example and to provide that the landed estate of anyone who dies intestate shall, like personal property, go according to the statutes of distribution among the next of kin. If the law and custom of primogeniture were to cease in this country, many of the difficulties now involved in the land question would cease also. We should then not have as much reason to complain of large landed monopolies. The land market would offer more frequent and better opportunities for advantageous investment than it does now. As things are, the land is so tied up that it is frequently in possession of persons who have only a shadowy interest in it. Improvements consequently are not made, leases are not granted, and the land is left comparatively unproductive. The expensive mode of transferring land which now prevails, is also made a subject of complaint. But as long as property in land may be subject to its present qualifications, as long as it is possible to create tenancies for life, in tail, in fee simple, and for terms of years almost at discretion, the title to landed estate must require the skill of learned men whose services must be adequately remunerated. The way to simplify our real property law and to make dealing with land cheap and expeditious is to do away with varied limitations. I do not think that an owner in fee should be allowed to create tenancies in tail. I fear we cannot go farther than this at present. But even if nothing more were done than the abolition of estates tail, the law of landed property would be somewhat simplified. Until limitations are fixed to the power of settlement, it is positive nonsense to talk of selling land like a piece of ribbon. On account of the cumbrous and expensive system of registration of title adopted under Lord Westbury's Act there was considerable doubt with regard to making registration compulsory throughout the kingdom. The present Land Registry Office in Lincoln's-inn-fields has not been a success. It is a difficult and expensive matter to satisfy all the requirements of the officials with regard to title and boundary. If such a registration of conveyances and mortgage were made compulsory, the small freeholder would suffer great hardship. He would have then to pay a bill not only to his own solicitor as he does now, but also another bill to a town agent, and yet another to the officials of the Registry Office in the way of fees or otherwise. If, however, a cheaper and better mode of registration were devised, the desirability of making it compulsory throughout the kingdom may well be considered. I think I may ask you to infer from what I have already said, that I hold none of the extreme views which are now propounded with regard to property in land. But still landowners must not forget that in a far wider sense than that given to the term in our law books,

they are the trustees of the nation. Private property in any thing, and still more private property in land, is subject to the general interest of the public. *Salus populi suprema lex.* If landowners exercise any of the powers now vested in them by law, to the detriment of the general good, the State will, as it is its duty, interfere, and will protect the public even at the sacrifice of private right. This general principle underlies all law and all government. It is a part of the compact of society and no class of men can with safety close their eyes to it. The Irish Land Act was passed, although it undoubtedly cut down private rights, because its provisions were necessary for the well-being of the people. It is right, therefore, that we in Wales should see if our own house is in order. It is useless to shelter ourselves behind vague verbiage and old prejudices. The eye of an enlightened public is upon us; and the severe scrutiny of that eye and the consequences of such scrutiny we cannot escape. In our history there never was a time in which it was more incumbent upon landed proprietors to do their duty than this. If they do their position is secure. But if, on the other hand, they are neglectful of the interests of the people—if they are unjust and arbitrary to those who occupy positions under them, with the certainty of fate they will have to account for such conduct before the bar of national justice. I think the miserable cottages in which we crowd our labourers one of the worst features of the Welsh country. Many farm-houses, too, are but little better, and are scarcely constructed with a proper regard to cleanliness, decency, and comfort. We erect school-houses to educate and elevate children whom we send back to homes which are often calculated to injure and degrade. Now the evil is patent. How is it to be remedied? I know well that it will take time to set this matter right. Many landowners are not rich enough to adopt at once a course of which their consciences approve. In the first place, the rich proprietors ought to set their poorer neighbours a good example, and erect convenient and healthy cottages and farm-houses upon their estates. In the next, labourers and artisans ought to be encouraged and permitted to build houses for themselves; and in order that they may do this, the landlords may help them by granting them long leases and by giving their support and superintendence to sound local building societies. A good land and building society, guaranteed by the names of the best men in the neighbourhood, ought to be established in every county in Wales. But while I urge the landlords to provide good houses for their tenants, the tenants must not forget that they have corresponding duties upon this subject. The cottagers in Wales fairly do their duty, but the farmers of the really Welsh districts are greatly to blame for their negligence in looking after their landlord's property. A landlord spends money upon a farm-house; he makes the rooms airy, comfortable, and neat. He boards and papers them, and puts in them good grates ready for cheerful fires. He returns a year afterwards. He finds the paper hanging from the walls, a grate eaten up with rust, and a pool of water and a heap of potatoes in his best room. This is intolerable. With the progress of education, the Welsh farmer must arise to something beyond the kitchen fire. I cannot upon an occasion like the present pass over the evils that result to the landlord, the tenant, the agricultural labourer, and to society at large, from the farmer's insecurity of tenure. All difficulties on this subject arise from the idea that there are, or ought to be, even in these days, feudal relations between landlord and tenant, and that their contracts ought not to be subject to the rules and considerations of ordinary commercial transactions. But views like these cannot obtain much longer. A tenant cultivates his farm not for the sake of improving it for his landlord's benefit, but in order that he may by his skill, labour, and the judicious use of his capital, do the best during his life for himself and his children. Such being the case, it is not to be expected that he is to invest his money upon the property of another, unless he has the safe opportunity of getting it back again. The proper cultivation of land requires the foresight of years, and the timely expenditure of money. A farmer must have years upon which he may base his agricultural plans and operations. If he has not, he must keep on drawing from the land every year. He must leave it in a state in which it produces about one-half or less of what it is capable of producing—the state of a great portion of the land in South Wales. A yearly tenant has in truth no chance of doing what is right with his

land. Indeed, he would be criminally neglectful of the interests of his family if he did. Then we hear that foolish suggestion of servile flattery on the one hand, and of pompous conceit on the other, of trusting to the honour of the landlord. For myself I would trust much to the honour of the landed gentlemen of Wales. But when we talk of business, we must have business relations made safe in a proper manner. When landlords lend money to each other, they require, I suppose, proper legal securities. And if a farmer invests the money of his children in a farm, he ought for their sake to have legal security for it. Landlord and tenant may differ about various matters—life is uncertain—trustees may come in during minorities—the heirs may not adopt the views and feelings of their ancestors. Against these and many other contingencies the tenant who probably invests his all in the land ought to be protected. I know that an occasional Welsh tenant sometimes says that he prefers relying upon the honour of his landlord to getting a lease. There is a little bit of servile cunning about this. What he really intends is that he prefers a yearly tenancy with the landlord's honour at the back of it, to a short lease of seven years, which simply means that his rent is to be raised at the end of it. The system of letting that appears to me to be best is that which places a good tenant upon a farm, and which enables him by honestly paying his rent and farming well to remain there for the rest of his life. I think a system of life leases the best both for landlord and tenant, with the arrangement when proper that the rent should be gradually raised on a scale proportionate to the increase in value of the farm. If the landlord grants a life lease he has the best guarantee from the tenant against the drawing away of the resources of the land, which, I regret to say, too often attends the termination of short leases, because the holder of a life lease knows not how long it may last. Before granting the lease the landlord should secure a good man in whom he may repose confidence. The tenant ought to be bound to farm well, according to the rules of good husbandry; but his free action ought not to be hampered by minute and vexatious covenants. Good farming depends upon accident of soil, season, and various other events, which cannot be determined in a solicitor's office. I object to all vexatious covenants with regard to rotation of crops, consumption of straw, and manuring. Confidence ought to be reposed in the tenant to farm well, and if he does not farm well the landlord can resort to his remedies at law or in equity. In every farming lease the tenant ought to have full power to destroy hares and rabbits. With the present game laws it is in the power of the landlord by an over preservation of game to ruin any tenant upon his estate. A good landlord will not of course do anything of the kind; but as there are bad landlords as well as good ones the tenant farmer has just cause of complaint that such a power should by the law be vested in their hands. It appears to me that the law ought now to step in to protect the tenant from the ravages of ground game. The over preserving of game tells, too, unfairly with respect to local taxation. The owner of one estate may over stock it with game and rabbits so as to reduce the yearly value to one-half. The consequence is that it is assessed to that amount only. It follows, therefore, that half of its proper burden of the rates is thrown upon their property. Game, as we know, is not rated at all. It seems very unfair that land over-stocked with game should be relieved from local rates at the expense of other lands, the landlords of which do justice to their tenants and to society by keeping the game down within the limits of legitimate sport. I think that in all leases the tenant should be protected against the destruction brought to the results of his industry by hares and rabbits. I trust that in addition to this the law will step in and protect him when such protection is refused by the landlord. I am not against sport; I believe its disappearance from the country would be a great loss, but I still think sport to be consistent with doing full justice to the farmer, and with the proper development of the resources of the land. The country requires that the land should be made as productive as possible. London and Manchester, Birmingham and Liverpool, and all the great towns and cities of this kingdom, require the landowners to permit their tenants to make the most of their land. As I have already said, for this purpose they are the trustees of the nation. It will not do for them to fall back upon old feudal notions which will not bear the light of this day. They must give over ideas of servile obedience in

all things from those who occupy land of them, and must seek only to enter with their tenants, as independent men like themselves, into such relations as are calculated to get the most out of the land for themselves and for the country. Their chief duty is to make as far as in them lies every nook of this country productive. They ought to seek to make the farmers and agricultural labourers prosperous. These are the landowners' duties. The country imposes on them these sacred trusts; will they discharge them faithfully? The country is standing aside, is waiting, is giving them a chance. Nay, it has done a great deal more, it has given them a positive warning in the Irish Tenant Right Act. If long and liberal leases are not granted, such as are required fairly to develop the resources of the land, you may rest assured a Tenant Right Act will be passed for Wales in the course of a few years. I do not think the typical Welsh landlord will read the signs of the times. I dare say he will smile complacently at what is now said. He will stick to his yearly lettings, his game preserves, his feudal authority over his tenants; he will, like Mrs. Partington, seek to do battle with the Atlantic ocean, which, with the certainty of fate, is coming on to sweep away his insane prejudices and the monuments of his injustice. A Tenant Right Act is soon to settle these questions, if he will not. I wish to speak in no unfriendly way of Welsh landlords. The system, the prejudices, the faults, of which I complain, they have not created, but have inherited with their estates. As far as I have any personal interest in this question, that interest is on their side. But it would be blind folly for us to close our ears against the demands of the time upon us, to refuse to listen to the thundering that is already at our gates, to cry out peace when there is no peace. In ways that I entirely condemn the land question is now being universally discussed. Theories wild and dangerous are propounded with regard to it; the grievances which exist are unfairly magnified, and by certain classes in this country every effort is made to cast blame upon the landed proprietors. All I wish is that the landed proprietors should not deserve it, but that by freely developing the resources of their land, by doing right to their tenants and agricultural labourers, they may be ably boldly to court inquiry into their conduct and position, and appeal with confidence to the justice of the British people!

Mr. PHILLIPS (Bolshau) said I think that the feeling existing between landlord and tenant, where the tenant holds from year to year, is much better than Mr. Williams represents; and that if he goes to London and listens to those gentlemen talking there of the feeling that exists between landlord and tenant in Wales, he goes to the wrong place. Now that he has come to Carmarthen, if we could bring a lot of landlords and tenants together and have the question actually discussed amongst them, he would find there is a great deal better feeling amongst them than he represents. I think that is the only point on which I object strongly to what Mr. Williams has said. With regard to leases, I can tell you that there are many tenants in this county and elsewhere in Wales who infinitely prefer holding their land from year to year to having a lease, because there are a great many objections to a lease. In the case of a lease for seven years Mr. Williams says at the end of seven years the landlord looks forward to an increase of the rent. But perhaps if the landlord gave a lease for 14 or 21 years the circumstances would be such that there would be an increase of the rent. There are times when land rises and falls in value, and I think it is but right that the landlord should have the benefit of the times as well as the tenant. But if you enter into the question thoroughly you will find that the tenants have no more reason to complain of the landlords than landlords have of tenants in the matters of a lease. If a landlord give a tenant a lease he is a great deal more in the power of the tenant than the tenant would be in the power of the landlord. You say the tenant invests his cash, his all on the land. I say he does not. And I say that the tenant can go on from year to year trusting to the times and the good faith of the landlord, and remunerate himself so as not to be a positive loser in the case of an emergency. I will not say he would benefit by giving up his tenancy, but I mean to say he can so cultivate his land for a few years that he can leave his farm with a positive benefit to himself. I am not going to occupy the time of this meeting by discussing the whole question, but I think I ought to say these few words in the interest of the landlords as well as the tenants. I consider

myself a landlord as well as a tenant; my interest goes with the tenant as much as the landlord. If my tenant fails so do I; if my tenant improves himself I consider I am sailing in the same boat.

The Rev. LATIMER M. JONES said I agree with Mr. Phillips that there are many tenants in this country who do not desire a lease of their farms, who would rather have a yearly tenure than a lease. They want to enjoy freedom, and if they had a lease for 14 or 21 years they would feel themselves bound for 14 or 21 years. They feel that if they are only tenants from year to year they are at liberty almost at any time to take their stock and crop to another farm. I have the control of a great many farms, very small ones I am sorry to say, but I tell this meeting that there is not a lease on one of them. Nor have I ever been asked for a lease; nor do I know of a single tenant on the estate who wants to have a lease. Yes, there is one exception; and in that instance it is the proprietors of a Dissenting chapel who are very anxious to get a lease. That I can understand; and I tell you they shall get it too. We have heard a great deal of rhapsodical nonsense about evictions in Wales, and it has been attempted to show that landlords here in Wales are a great deal worse than landlords in England. Now I think this meeting is pretty generally agreed that landlords in Wales are as good as the great body of landlords in England; so that the land question in Wales if it comes into prominence at all will be connected with the land question in England.

Dr. NORTON said: The entailing of land, he held, prevented a large number of people who would otherwise buy land, from doing so, because of the great expense attending the disentailing of it. There were many people in this country, he believed, who owned land who would be only too glad to disentail it; and there was an immense number of people who were desirous to invest their savings in land who were hindered from so doing by the expenses apart from the conveyance. An ordinary conveyance in this country was exceedingly expensive, but what was the expense when connected with entail? That meeting was not the place for a man to mention his own private affairs, but he might say that some time ago he was himself unfortunate enough to buy a little bit of land that was entailed. It was a portion of an old estate, and the person who sold it was descended from an old Welsh family. Well he bought this land and without going into the minutiae of the matter, suffice it to say, that there was enormous difficulty experienced in the disentailing of it. When he went to the lawyer's office after receiving the bill of charges the difficulties connected with it were pointed out to him, although the purchase money was only a few hundreds of pounds. Now it was wrong that such a state of things should continue to exist in a country so highly civilised as ours; it placed barriers in the way of the sale and purchase of land in all parts of the country, for the possession of land even in small farms elevated the status of the men who obtained them. And he maintained that they could not do better than sub-divide the land into small farms. Although he remembered reading in a great number of instances that the learned men of this country have said that the division of land is a bad thing, yet he would say that by putting a man in possession of a small plot of land you give him a stake in the country, and it could have no other effect than that of making a better citizen, a man that would stand against revolution, a man that would endeavour to make good laws for the community of which he was a member. Therefore he contended that the first thing to be done was to simplify the title to property. He believed with his late father that the system of registration that exists in America—of course they did not like to be Americanised—was very much better than here. There the cost of registering the title would not amount to more than three or four dollars for 100 acres of land. And when a person purchased property in America on those terms, it could be transferred to another in as easy a manner. And he could not see why an easy system could not be devised for the registration of property in this country by the general public, to which the lawyers themselves should be compelled to agree. Because it should be remembered that lawyers like doctors would not willingly do anything against themselves. It was not likely that they would willingly consent to a plan which would relieve them from the trouble of reading through deeds and charging so much for it. Now he did not grumble at them at all on that account. If privileges were conferred on any class, that class would use those

privileges for its personal benefit, and not for the benefit of the general public.

A Voice: Disestablish the lot.

Dr. NORTON said that need not be done. He knew it was said that if cheap litigation, for example, could be had, that it would be the means of causing more litigation than at present. But there would be no room for litigation if matters were carried on fairly.

Mr. BUCKLEY (Penyfa) said it would appear by the title given to the very able essay that had been read, that there was something peculiar in the land question in Wales, something different from the land question in England. Now, he was pretty well acquainted with a good deal of land and farms in England, and had returned only the previous night from Warwickshire where he had a good deal of intercourse with farmers, and had gone over a good deal of land. The peculiarity of the land question in Wales, if it existed, hinged chiefly upon the Welsh farmers not having capital to invest in their land to carry out cultivation as was the case in most parts of England. The question would therefore arise how was capital to be directed into the land in Wales. And there he agreed very largely with the opening address which had been delivered, that there must be security for the investment. The remarks made by Mr. Williams respecting leases should, however, be very much qualified indeed. The man who was going to take a farm in a very dilapidated state, who intends to drain excessively, and was going to build, and almost to treat the farm as if it were his own, such a man would lay out 20 or 30 per cent. of the fee simple in the land, and he ought to have a long lease. But such instances were very rare exceptions to the general taking of land. Now he would mention the instance of a letting that he was familiar with, which took place last Michaelmas. It was not the case of a small farm, for the rental was nearly £100 per annum. The person who took it wanted a security for his outlay, and he took it for his son; being a wealthy man, he gave his son down at once £2,000 to go into the farm with. His son would have a good deal more if it was required. His wish was that the capital invested in the land should be productive, so that he did not want a lease so much as security. Now there he came to the point. He believed, as had been stated, that a large proportion of the Welsh farmers did not want leases, but they required such an agreement as would give them security. Now, what security did this man to whom he had been referring ask for and what security did he get? because he himself happened to be familiar with the provisions of the agreement that was made. Well, if he drained on a certain principle, and his landlord gave him notice, he would be paid in full for his drainage. In liming the land he would be paid for all the lime put in during the last year, for one half of the lime put in the year before, and one quarter of the lime for the year before that. Then as to manure; he would be paid for one half of the artificial manure, and one half the value of the farm-yard manure that went into the land the year before, on his showing the bills. Then as to the in-coming tenant taking to the crop on the land, he knew that the landlord and tenant walked all through the fields just before harvest, and both being admirable judges, they easily put an estimate on the value per acre of the wheat, barley, and oats, and soon came to an agreement as regards that. And the same thing it was agreed should take place at the end of the tenancy on the landlord giving notice. But if the tenant gave notice, there would be a qualification to some degree. But there were no restrictions as to cultivation further than that none of the meadows or pastures or anything of the kind were to be ploughed up. With such provisions as those that had been mentioned no tenant would hesitate to lay out his money. He ought to have mentioned something about going through the roots, because on that farm there were something like 30 acres of roots, or even more than that. They were very heavy crops, and the valuation came to a large sum; so that if a man cultivated in that kind of way he would have a large sum whenever he went out of his farm. And he could cultivate in that way with perfect security, yet without a lease, having only a good agreement. And he believed that to either Welsh or English farmers having capital an agreement of that kind would be more preferable to them than a lease by which they would be bound up for a length of time. He ought also to mention something about arbitration in the case to which he had referred. In the agreement there was a

provision for arbitration should not the landlord and tenant be able to come to terms. In that instance they did come to terms, because they were both good judges. It was a large farm. The farm was let on liberal terms by the landlord, and he had no doubt that the tenant would do well, and he had no doubt that the tenant would not feel greater hesitation under his agreement than under a lease in doing everything for the land that would promote production and improvement.

The Rev. Mr. CAUTLEY said there had been a comparison drawn between England and Wales with regard to agriculture; but it had not been fairly drawn. There were great difficulties experienced by agriculturists in Wales which were not encountered in England. One of the difficulties was produced by the humid climate, and the wetness of the land necessitated a great deal of drainage. Again, there was an enormous quantity of boundary fences to the land, which required a great deal of expense to keep them in repair. As an illustration he would mention that on his little property of about 700 acres there were no less than thirteen miles of boundary fences. That seemed to be a most exorbitant quantity, but it was a literal fact. Therefore he felt a deep sympathy with the landlords and an equally deep sympathy with the tenants, who often found their land overrun by the cattle of their neighbours; in fact, his own shepherd was often employed in hunting up his own stock and driving the cattle of others off the land. Such were some of the difficulties that had to be contended with in Wales, and the consequence was that the conditions which landlords here had to make with their tenants differed in a very great degree from those made in England. Now in the first place it would be most unreasonable, particularly when the tenants as a class were notoriously poor, to require them to meet those difficulties single handed. He felt that the tenants in Wales required very great assistance from their landlords; and that without such assistance the improvement that was so much desired by Welsh agriculturists must be exceedingly slow, until the two—both landlord and tenant—put their shoulders to the wheel and worked together in an united and liberal spirit for the promotion of the one general good. To do that what each party required was security. The landlords as far as he could see would easily be got to give their tenants security if the latter had much money that they were willing to lay out. But he perceived that the farms throughout the district were to a considerable extent occupied by tenants exceedingly poor, who never cared to keep up their fences, who had no chance from want of means of dealing liberally with the land, who would rather send their cow to a poor narrow black bull that fed on the mountain, the use of which might be obtained for nothing, than to a well-fed bull for which they might have to pay ten shillings. What under such circumstances was a landlord to do? He was bound to bring his own will to bear on the tenant, and reduce the evil as much as he can. Now all that kind of thing arises in a large measure from the smallness of the holdings in Wales. He dare say there were gentlemen in the room who sympathised with small holdings. Now he lived in a parish of 18,000 acres of land, and the land was divided among 80 tenants, every one of which had an excellent farm. But if the holdings had been small there would not be half the quantity of corn or half the quantity of meat which was now produced there, simply because the farmers would not have the money wherewith to do it. Now in Wales oil-cake and artificial manures were very little used, and that was because the tenants had small holdings and also because they stood in fear in case they expended money on their farms. He must be permitted to say that his conviction was, from conversation with the people with whom he mingled, that in Wales there was a very strong fear in the mind of every farmer of having his rent increased should he in any measure improve the cultivation of the soil. They might meet the question as they please, but he would tell them plainly that was the fact as far as his experience went, and he had inquired a great deal on that point. And he knew not only that the fear existed but that there was even ground for it. He knew that the rent had been increased in instances where the farmer cultivated more liberally and produced a little more corn in his stack-yard. Surely such a thing as more corn, &c., in a tenant's stack-yard was just what a landlord ought to desire to see. A landlord ought to desire to see his tenant's stack-yard containing plenty of stacks, an abundance of roots, and as big roots as he could grow. But for a tenant to do that he must have security as

had been said. He was able to speak very clearly on that point. He knew the circumstances connected with one of the best farming districts in England, viz., Lincolnshire. He did not suppose there was any part of England where farming was better than there. And he learned from a great friend of his who lived in that county, an agent who had the management of many large and valuable estates, that he gave infinite preference to a yearly occupancy with perfect security to the tenant. Now again, he had with him from another friend of his, who was well known to all present at the meeting—it would not be right to mention his name—a copy of a lease which that friend intended to give to his tenants, and which, unless they accepted, they would have to go out of their farms. They had discussed together the provisions of that lease over an excellent glass of port wine, and in that way things could be discussed pleasantly, in fact he found there was no place where a thing could be discussed more pleasantly than at a dinner table. Now, he would just give the meeting an idea of the nature of that lease by reading one of its requirements—"A certain quantity of poultry, turkeys, eggs, and skiffs of coal are to be brought at a certain time at the squire's house." Surely the tenants would not accept that. As he said to his friend that was only imposing on them an additional rent. And why, therefore, could it not be put into the lease in its right form at once? Then, again, there were other conditions requiring the tenants to keep up the river bank, to keep up the fences of the plantations, in fact to keep everything in order. In that lease there were about thirty covenants; and he would defy his friend to get his tenantry to carry out these covenants. And if the tenantry could not carry them out what was the use of the pretended attempt to make them: what was the use of tying up the tenantry to a lot of covenants which were not intended to be carried out. Why could there not be a more distinct understanding between the tenant and his landlord, the landlord saying to the tenant, "You trust me in some things, and I will trust you, and will not interfere with your farm." The landlord might ride his horse on the snaffle, yet still have the curb ready in case it were wanted. He would just refer them to what that eminent author Arthur Young had said about the state of Scotland when he paid it a visit. At that time the state of Scotland was infinitely worse than anything now existing in Wales. Arthur Young said that nothing could be worse than the state of farming in Scotland at that time in the Lowlands; and it was produced and maintained by the landlords giving their tenants leases, binding them down for twenty-five years with stringent covenants. The fact was the Scotch tenantry at that time were like children, and did not know how to farm. This system of long leases was altered there; and as soon as the farmers saw it was to their interest to farm well they quickly began to improve; still it was necessary that covenants should be imposed suitable to circumstances, otherwise tenants might take undue liberty with the land they occupied. He knew an instance of a farmer who used some 400 pounds of cake every year in the feeding of his cattle; but he had a neighbour who did not use anything of the kind. Did anyone suppose that one of these farms would produce as much as the other? No. Well, then, the two tenants required to be differently treated. Now, protection for both landlord and tenant must be obtained by one of two things, either by leases or annual agreements. There were great objections to leases, although he did not wish to dwell on the subject. It was said that in a twenty-one years' lease there would be seven years of getting a farm into good condition—a succession of seven years of good farming; but, then, there would be seven years of drawing out of the land as much as possible. That would be the effect unless the tenant was stringently tied up during the last seven years. It would be according to human nature, that a man after putting something into the land should try to take it out again. In nine cases out of ten tenant-formers did it. Now, he did not think if he were a large landlord he would give a lease on a single farm unless the covenants were very strict. He would say, "Now, Thomas, here is a lease for you, if you like. If you do not like the covenants, there is an annual agreement, take which you please." Now, in looking at the covenants in the copy of an annual agreement which he had received from Lincolnshire, he was struck with the hard way in which they pressed on the incoming tenant. The incoming tenant was to pay for a large quantity of oilcake, of bones, and a quantity of other things which were called

permanent improvements, and it would bear very hard on a young man who went into a farm, perhaps with no more capital than was necessary for him to stock his farm with, and yet was required to pay down £1,000. That would cripple him. What would be the consequence? He would go to the bank. Now, they had heard something about the lawyers' consciences, but bankers had consciences too. They were very accommodating, no doubt, but when they got people into their hands they generally pinched them very tight. His object in referring to that was to show that the landlord should stand in the stead of the incoming tenant and arrange with the outgoing tenant what was to pay. Generally speaking, there was some difficulty about an arbitrator between the outgoing and incoming tenant, and why should not the method be adopted which he had suggested? He would prevent those two men, the outgoing and incoming tenants, from coming together by letting the landlord himself make whatever arrangement was necessary with the outgoing tenant. He recommended to the meeting a book containing papers read on the tenure of land by Mr. Masfen, at a meeting held at Birmingham on the subject, when the leases of Lord Lichfield were discussed. Personally, he was of opinion that the question of leases and the question of covenants should be separately discussed, for the whole subject was one of great importance, and not easy to solve. With regard to the land question in Wales, he had heard two or three strictures made on points to which he had intended to refer. There could be no doubt that the land in Wales was capable of very great improvement, although he was not going to discuss the improvement of land; but still he would say that it was capable of being much improved by an improving class of tenants. Owing to the number of small farmers in Wales, the land did not produce as much as it was capable of producing. He did not wish to see small holdings extinguished, but they should be reserved on estates as a sort of beginning to young farmers, who might be advanced to a higher position as they deserved it. Again he would say that small farms for that reason ought to exist, and he hoped they would continue to exist. Still, if a landlord wished to have a tenant of whom he might be justly proud, he must get a man of capital, a man of enterprise—a man who with capital and enterprise would cultivate his land on the most improved modern system, one who would not hang back, but keep up to the advanced state in which we were now living. Now, he had brought implements into Wales, and the labourers have not known how to use them; they have no understanding of them. Reference had been made to the question of cottages, and so he was brought to that subject also. And he would say that until a set of good labourers could be found in Wales, there would not be a set of enterprising farmers. A farmer could not farm without the labourer. The system of cottages in Wales was excessively bad, and it was a matter to which landlords, he felt sure, must pay attention. For what was the consequence of the present system of cottages? The result of it is that the labourers have no care for their homes; they go into Glamorganshire, or into England, or emigrate to one of the colonies, because they have nothing to attract them to the home in which they have been born. Labourers might spend a whole winter in this part of the country, and get only a day's work now and again. He could say more on that subject; but would only remark that it was everything in considering the land question in Wales to see how a good class of agricultural labourers could be got. He would rather have three men at 15s. a week than four men at 11s. per week, who were neither able nor willing nor careful to do their duty. Now, he said, that, after having some experience in the employment of agricultural labour in Wales—for at the present time he was paying about £20 per week for labour in the Principality—the labourers of Wales were quite capable of being trained; but the truth was they had no thought, and the whole system of labourers was but a makeshift system. The labourers left this thing here and that thing there, and they acted in such a way as would half ruin a landowner in time unless he could take care of himself. A few words in conclusion. There was a most happy country. He himself lived in Cambridgeshire, yet nothing did him so much good as to come down into Wales, and breathe the fresh air for a few weeks every year. If he carried a gun in his hand he need not go far from home, and he should like to go some time for a few cock pheasants

over the land of his friend the Rev. Latimer Jones, and it was his delight to go over their arable lands. Indeed, he might say that he would rather make two per cent. in Wales than five per cent. in Cambridgeshire. And not only so, but he had met in Wales with great kindness and hospitality. His duties in his Cambridgeshire parish were large. He kept two curates; but now they insisted upon his return home, flattering him by the compliment that they could not do without him. For that reason he feared he should be reluctantly compelled to return in a short time. One word more with regard to the capabilities of the land in Wales. He feared its capabilities were undervalued. The land in Wales only wanted energy and drainage and deep cultivation and well manuring with the growth of as little corn as possible to make it yield well. He had been just selling three and a-half acres of turnips on land which two years ago was comparatively exhausted. He could have hunted a mouse all over the corn crop on it, and never lost sight of it. Now, he had obtained £21 7s. per acre for those turnips, and the land was capable of producing a great deal more.

Mr. LEWIS BRISNOB would say the same as Mr. Buckley and other speakers that leases were not required in this country, and that leases would have the effect of encroaching on the rights of property, and for the reason that they were dangerous in that respect he objected to them. And therefore tenant farmers ought to accept agreements. Besides there was the danger of tenants not being able to carry out the leases which they had obtained. A tenant might also get a bad lease, say twenty-one years, and after expending the whole of his money in connection with it he might be obliged to fulfil its conditions at a loss. But on the other hand, if a man had a yearly agreement he might back out of it at any time, and instead of being obliged to spend a large sum of money in connection with it, might put that money by, for those who came after him. That was one reason why a lease should not be forced upon a tenant. A yearly agreement was far better for a tenant farmer; and this would be better for the landlord also, because if he had a bad tenant he would then quickly get a better one in his place. Now, he did not go so far as the rev. gentleman who had just sat down in respect of arbitration. In such a case as he had suggested the landlord could not help favouring the incoming tenant. He would be tempted to discard the interest of the one who was about to leave him. For every lease in this country twenty agreements would be found, and he looked upon that as something like a testimony that agreements were found to be better and more advantageous. Another question mentioned by Mr. Williams was that of entail. Now what he understood to have fallen from Mr. Williams on that point he also considered to be dangerous. Moreover, he thought on that subject Mr. Williams somewhat contradicted himself. He asked for fixity of tenure for the tenant, and yet he objected to entail which gave fixity of tenure to the landlord. He himself held that entails in the abstract were good. Everyone knew that there were persons who were disposed to squander their property, leaving their children after them penniless. For that reason he contended that the entail of estates ought to be upheld. And now as to the expense of conveying estates that were entailed, to which Dr. Norton had referred. It was his opinion that the expenses incurred in the case Dr. Norton had cited, must have resulted from the investigation of a long title, a totally distinct matter. His own experience was this, that the cost of barring entail was only some £3 or £4, anyhow it was not many pounds. With regard to the game question mentioned by the Rev. Latimer Jones, he was in favour of some law by which it should be embodied in an agreement between the landlord and tenant that the landlord is to permit the tenant to destroy the rabbits, the tenant giving the landlord two or three days' notice of his intention to do so.

Mr. BUCKLEY explained that he was in favour of the landlord and tenant making every arrangement they could, and that an arbitrator should be called in should such an attempt fail.

Dr. NORTON also said that he spoke of the expense and difficulty of barring entail being an obstruction to speculation in land.

Mr. BRODIE (Tyrdail) considered it was bad to agitate what he called the first part of the land question, touching the rights of property. At the same time he could not understand the objection against leases. Those who objected to leases were labouring under a mistake. He himself came from a country where leases were universal, and it was hardly possible to cal-

culate the improvement that had been effected in Scotland under them. It might easily be believed that a tenant farmer was as proud of his profession as a clergyman or a doctor was of his, and he contended that the way to make a tenant farmer thrive was to give him security under a lease. It was a matter of pride to a tenant to walk over his land after he had drained it. But he contended that if a tenant farmer was continually liable to six months' notice he would never care to effect improvement. Disguise it as they might, leases were the only and the great security for improvement. Something had been said about entail and large properties. Now, he could tell them as a fact that tenants preferred to be on large properties. And this point had struck him that it was generally the large landed proprietors who were the foremost in effecting improvements. What did they find in the county of Carmarthen? They found Earl Cawdor draining and improving in every possible way. They found Lord Dynevor also draining in full force. In his own neighbourhood the same thing had been begun. Now those whom he had just named were some of the great titled gentlemen of the county, and what were they but descendants of Welsh princes and Scottish chieftains? On the other hand, there were many of the smaller landowners who suffered their property to remain in the same state as Julius Cæsar left it. There could be no doubt about it. There was another fact, whether it would please Mr. Bishop or not, that land let on lease would fetch a higher rent. That had been found out. And it was a foolish idea that a tenant if he had a lease for 14 or 21 years was altogether at the close of it at the mercy of the landlord. There was no such feeling. A tenant, if he was a good tenant, had nothing more to do, on the approaching expiration of his lease, than to apply to his landlord two or three years before its termination, and ask that it might be renewed. And generally speaking it would be renewed. In his own case, when he left Scotland, he asked the agent not to let the farm for a short time, and he did not let it for more than twelve months. As for tenants not wishing for a lease, that was a pity; in that case they should trouble themselves with some other profession.

Mr. LEWIS (late of Llwynfedwen) also spoke in favour of leases.

The CHAIRMAN: I said it appears to me we have been wandering away a good deal from the subject this evening. The question as I understand it to be, was not the interest of the landlord or tenant, but the land question in Wales, and what is the best way of making the land most productive. Now, gentlemen, the tenant's interest has been most ably advocated that he should have fixity of tenure. I believe that the landlords in Wales are honest men, and that they wish to do no injustice to their tenants; I believe they would be most anxious that their tenants should have every security that the money invested in the land should be returned to them. But I think this also, that the landlord should have security that the tenant should not rob his land. We know very well, gentlemen, that a tenant may go into farm while it is in good condition, and that he may wrong that farm, and leave it to his landlord at half its value. Now the landlord should have some security to prevent the tenant doing that. Now the point to which I have the pleasure of directing your attention is that of

justice to both landlord and tenant. I think before we tie up land a commission should be appointed to take into consideration the value of the land at the present moment. We should have a kind of machinery, something similar to that under which surveyors are appointed under the Dilapidations Act for the clergy. Landlords should have the power of calling in a surveyor, and ascertaining whether the land is cultivated according to the terms upon which it is let. And the tenant should also have the power of calling in the surveyor to say whether the landlord was coming down upon him, and requiring him to do more than the covenants of his agreement compelled him to do. I think if you interfere with free trade in land, and you do not allow it to be a mere agreement between the landlord and tenant, you must have some machinery of this kind. I am only suggesting this in case you are going to carry out Mr. John Stuart Mill's theory that there is to be 'fixity' of tenure, and the landlord is to have no control over his land. I think, however, that it will be much better that the whole matter should be left as it has been left, a matter of arrangement between tenant and landlord. I must confess I agree with Mr. Brodie in saying that there is nothing like a lease, provided you have something of the kind of machinery I have suggested, whereby a surveyor should be called in to see that the lease is carried out. There should be an impartial person whom either the landlord or tenant should be able to call in. And I would not have the choice of the arbitrator left to the two persons; I would have a public arbitrator. The Rev. Latimer Jones has said you must have good tenants. It is all very well to say that, but the landlord may get a good tenant, and if he has a lease his son who may be called upon to carry it out may be a bad one. Therefore if you have fixity of tenure you must have some power to compel the person who takes the land to fulfil the covenants of his agreement. I have thrown out this suggestion because I think it is of the utmost importance that the question of the holding of land should be thoroughly discussed. There can be no doubt that it is one of the most important questions. Nobody can go through this country without seeing that there is a great deal of land lying idle that is capable of a great deal of improvement. If we are to have the question left to vexatious cogitation it will paralyse the action of both landlord and tenant, so that the sooner it is settled the better. For I am sure there are many landlords at present who have stopped improving because they do not know whether they will ever recover the money they have laid out. On the other hand the tenants are afraid. I trust before long that the question will be effectually settled, and that we shall know what our interests are. This is essentially necessary now, when wild suggestions are made as to land, as if it was not similar to any other kind of property. There are people who look at the matter as though persons who have been receiving 1 or 2 per cent for their land are to be deprived of it and not receive the value of it. I am delighted that my friend Mr. Williams, who I thought would have introduced this question in some extreme manner, has not done so.

Mr. WILLIAMS replied, and a vote of thanks was passed to him amid much applause.

THE FOOT-AND-MOUTH DISEASE.

LOCAL RESTRICTIONS.

At a meeting of the local authority for the county at Elgin, Mr. McLean of Westfield presiding,

Mr. MACKESSACK (Ardgye), in terms of previous notice, moved, "That all regulations made by the local authority with the view of preventing the spread of foot-and-mouth disease be recalled on and after 1st December, 1871." He had not made this proposal without having consulted other farmers. He had spoken on the subject to twenty or thirty gentlemen, and they were all agreed on the point that something should be done in the way of changing the regulations and restrictions of the local authority. It was well known that foot-and-mouth disease had existed in this county for a very long time. On

some farms it existed so long back as twenty-eight years ago; and it existed on his own farm eighteen years ago, though he (Mr. Mackessack) did not know of it at the time. About eight or ten years ago, a great many of the farms in the county were infected; indeed, it went from one end of the county to the other. Well, what did the farmers do at that time? There was no word about cleansing the byres or putting out the dung as they did now when the place was declared free; and the result was that there was not one case for ten now. He remembered perfectly well that at that time the disease existed on his farm at this period of the year. Well, he drove out his dung in the spring following on the lea fields, put fresh cattle out,

and there was not one of them infected with the disease. Most of the farmers did the same at that time. Now, however, before a farmer could get his place declared free, he must cart out his dung as soon as the place was declared free of disease, and incur a great many other expenses. There could not be a more effectual way than this of spreading the disease. A farmer told him, the other day, that he had not the disease on his farm, but his neighbour had had it, and as he was carting out the dung in terms of the regulations, it was certain to spread to his farm. Then there was another restriction which he considered very bad, viz., that which prevented the removal of animals from any field or place where they had been discovered to be infected with the disease. At Carsewell, in the end of harvest, fifty cattle grazing in a field were discovered to be labouring under the disease. It was the time of the bad weather; they could not be removed, and he was quite convinced that the owner of the cattle must have lost 50s. per head, which was a very serious matter. Having met the owner one day, he remarked that it was cruelly to animals to keep the cattle outside. He replied, "I am not allowed to move them. The local authority will not allow me to drive them only one or two hundred yards along the turnpike road." He was sure that, had the owner of these cattle been allowed to put them into his steading, he would not have lost 5s. a head, instead of 50s., or about £120. The cattle stood there during a long run of bad weather; and, indeed, it was a wonder that some of them did not die. They were next the public road, and could be seen putting their heads over the dyke, and, consequently, it was almost impossible for any cattle to pass along the road without being infected; whereas, if they had been kept comfortably in the stable, there would have been no chance of infection. It was his opinion that the Privy Council made quite enough of restrictions without the local authority making any at all. By the Orders in Council, they could fine people who were found with diseased beasts, and who had not so reported to the inspector. If the farmers would only try to manage the disease as they did in former years, there would not be one case for every two that there were now. A Ross-shire farmer told him the other day that they were just beginning to see that the local authority act was all nonsense, and did more harm than good. Some counties had given it up altogether; others had never taken it up at all. It was quite competent for them to drop it at any time. He had no objection, if the meeting wished to modify his motion, and make it to the effect that they recall the regulations for three months. The farmers could not surely object to this; and he was pretty certain that if they adopted this course, there would be very few cases of foot-and-mouth disease in the county at the end of that time. He might mention that several parties had told him that they would just as soon buy cattle with the disease as without it, because they would rather have it past than be bothered with it again. However, he did not mean by that that he wished to keep the disease—he would rather see it sent to Jericho, and the local authority powers after it. He concluded by proposing the adoption of his motion.

The CHAIRMAN: Mr. Mackessack has fallen into one mistake with regard to the moving of cattle from one place to another on the same farm. We have no power to dispense with that regulation, because it is enforced by Act of Parliament. Any rule that has been enacted by the Local Authority can be dispensed with, and as far as I am concerned, I am ready to join with you in requiring their suspension; but there are certain matters with which we cannot interfere.

Mr. MACKESSACK: If it had not been for the Local Authority, could not these cattle, to which I have referred, have been removed?

The CHAIRMAN: No. I looked over the various Acts of Parliament, and I find it is illegal to convey infected cattle over any public road, or to expose them in any market or sale-yard, or in any place adjoining a sale-yard, or to carry them by rail, or to keep them in unenclosed ground, or—and this is the most important of all—to fail in reporting to the police the existence of the disease as soon as it is observed. The Act of Parliament also makes it obligatory on us to appoint an Inspector, whose duty it is to report to the Local Authority and the Privy Council the existence of disease.

Mr. YOOL remarked that there was no doubt that if the cattle were labouring under the disease, they could not be removed.

The CHAIRMAN: Mr. Mackessack has only mentioned one item which we have power to dispense with, viz.: The carting out of dung.

The CLERK: (Mr. Cameron) said that the regulations as regards the carting out of dung were made by the Local Authority, in terms of the powers conferred on them. The following was one of the regulations which Mr. Mackessack's motion would strike at: "That all sheds or places used by animals infected with foot-and-mouth disease shall, as soon as the disease has ceased to prevail, be disinfected to the satisfaction of the Inspector appointed by the Local Authority." If Mr. Mackessack's motion was carried in its entirety, the effect of it would be this—that farmers and others who moved beasts would only be prevented from moving affected animals, but would be perfectly free to move other animals that had not taken the disease. It seemed to be pretty generally agreed that the carting out of dung and the whitewashing of the premises could be dispensed with.

Mr. WILLIAMSON thought Mr. Mackessack's motion was a very good one, so far as the driving out of dung was concerned; but when he considered that the effect of the motion would also be that when any cattle were affected, it was in the power of the farmer to remove those which, though not affected, would be in the adjoining byre, he thought it was rather a dangerous step to take; and he for one would decidedly set his face against that part of the motion. They knew that some parties would not take cattle to the market when they had others affected; but they also knew from experience that there were parties who would not scruple to do so. If that were done, they would never be free of foot-and-mouth disease.

Mr. YOOL thought that the cattle in this country were subject to attacks periodically from foot-and-mouth disease; but so long as the importation of foreign, and especially of Irish beasts, was allowed, the country would never be free of it. They seemed to be the means of propagating the disease; and so long as they were allowed to come into the country, it would not be possible for the Local Authority to stop the spread of the disease. In October, 1870, the Privy Council gave power to Local Authorities to make further regulations with the view of stopping the spread of the disease. He saw the other day in the *Mark Lane Express* a statement that not one half of the Local Authorities had taken advantage of these powers, and several that had taken advantage of them had rescinded their resolutions. It appeared to him that the rules made by the Privy Council would be just as effective in checking the disease as these additional rules that had been adopted by the Local Authority, considering that these Irish beasts were continually coming into the country, and that they had no power to exclude them.

Mr. ROSE was quite agreeable to the rescinding of the regulation in regard to the clearing out of dung, but could not approve of cattle being removed from places where the disease existed.

Mr. MACKESSACK: I am quite satisfied that if you adopt the course I have proposed for three months, you will not have many cases to report.

The CHAIRMAN: The general opinion seems to be that these rules with regard to the clearing out of dung might be dispensed with from to-day; but that the control of the Local Authority over the movement of cattle on farms should remain as heretofore. The disease, so far as I can judge, is on the decline now.

Mr. HARRIS: If Mr. Mackessack's motion be carried, how would it affect our control over the markets?

The CLERK: It would not affect it all. It might be advisable to explain to the meeting that the regulation for the carting out of dung on places where the disease had existed was simply an instruction to Mr. Tait from the Local Authority. That could be rescinded immediately, and they could also rescind altogether the regulation as to disinfection, without touching the other rules.

Mr. YOOL remarked that he held the opinion that the inspection of markets was of no value at all; it was simply a waste of public money.

After some further conversation, Mr. Mackessack agreed to modify his motion as follows:

"That regulation fourth of the Order of 25th November, 1870, be recalled, which is to this effect—'That all sheds and places used by animals affected with foot-and-mouth disease shall, as soon as the disease has ceased to prevail, be disinfected

to the satisfaction of the Inspector appointed by the Local Authority."

Mr. WILLIAMSON: I think that will be satisfactory to everybody.

The motion, in its altered form, was then unanimously adopted by the meeting.

A meeting of the members of the Devon and Cornwall Chamber of Agriculture was held on Thursday at the Royal Hotel, Plymouth, to "consider the regulations under which foreign cattle are imported into this country, with a view to checking the foot-and-mouth and other contagious diseases." The chair was taken by the president, Mr. John Trenayne, of Heligan. The attendance was very small.

The CHAIRMAN considered that the subject under consideration affected all classes of society, consumers as well as producers. He had hoped at that particular time, when the fat cattle show had called so many agriculturists into Plymouth, and more especially as Devonshire had suffered exceedingly from the disease, there would have been a large meeting, as it was desirable to follow the practice of other chambers, where large and unanimous meetings had demanded from the Government more stringent measures for repressing disease.

Mr. SPRY (Sortridge) introduced the subject for discussion, and urged the advantages of stamping out the disease, rather than seeking for a cure. He did not undervalue the services of the local police, or deny the fact that Orders of Privy Council and Acts of Parliament had effected some good, but he thought that nine out of ten practical men would say that the Acts of Parliament were lamentably inefficient in action, expensive in process, annoying in operation, and, as the continued virulence of epidemic incontestably proved, singularly unfortunate in arresting the spread of the disease. With respect to the number of cattle in Devon and Cornwall, they were retrograding instead of advancing. In the face of the utter failure of existing arrangements it would be most decidedly beneficial to provide suitable accommodation, and try the experiment of slaughtering foreign cattle at the port of entry, and also to inspect every vessel laden with cattle by a duly qualified inspector; and in the event of any contagious disease existing on board, to separate the healthy from the diseased by the means of hospital accommodation, as well also as the thorough cleansing and disinfecting the ship on board which such contagious disease exists. He moved "That in the opinion of this Chamber the present rules and regulations under which foreign cattle are imported into this country are lamentably inefficient in operation as regards their dealing with contagious diseases, and this Chamber is unanimously of opinion that the only method of effectually dealing with such diseases is by the providing suitable and necessary buildings for the compulsory slaughter of all foreign cattle at the port of entry."

Mr. BARNETT, V.S., said they wanted prevention rather than remedies. The motion spoke too exclusively of foreign cattle, as there was infinitely more danger in landing Irish cattle than landing animals from Spain. Existing orders regarding foot-and-mouth disease were not properly enforced. In Plymouth, Spanish cattle were inspected on landing by a veterinary surgeon, whilst Irish cattle were examined by an inspector of nuisances. A veterinary surgeon could discover more disease in two minutes than an inspector of nuisances could in two hours. He objected to the idea of a policeman understanding the presence and progress of a disease in cattle. How agriculturists could expect the foot-and-mouth disease to diminish under the present mode of carrying out the regulations for providing against its spreading he could not tell. It was as likely that cattle coming from the Smithfield Show would bring foot-and-mouth disease to Plymouth, as any imported from abroad.

Mr. HENRY CLARK spoke of the small attendance at the meeting. Men should not only subscribe to Chambers of Agriculture, but should also attend meetings and discuss the questions introduced. If members did not come to the meetings they had better cease connection with it altogether, as its promoters would then know its real position. He could not

agree with Mr. Spry's motion, for if all foreign cattle were slaughtered as soon as landed, they would kill not only the fat cattle, but also the store stock, and agriculturists would then be in a very poor way. Store stocks were at present very scarce. The cattle imports into the United Kingdom for the ten months ending 31st of October last were—Oxen and bulls, 120,417; cows, 62,451; calves, 365,049; sheep, 792,332. If all these were slaughtered on landing, could the supply of store stock be kept up by breeding? Many Chambers were in favour of slaughtering all fat stock when landed—although some Chambers did not go so far as that—and putting the store stock into a certain period of quarantine. Mr. Spry's motion was confined to foreign cattle, but more disease was brought from Ireland than from any foreign port; but were they to slaughter all stock coming from Ireland as soon as landed, or were they to put store stock into quarantine? If they agreed to the latter how could it be carried out? Liverpool imported something like 10,000 store cattle from Ireland weekly, and could all these be kept in quarantine for any time? Such a plan would practically prevent the importation of store stock at all from Ireland. Some farmers had said it would be better even to have the foot-and-mouth disease in the country, if they made the best of it, than to keep store cattle in quarantine. One result would be increased prices for meat. Sir Massey Lopes had said in that town that he (Mr. Clark) could not instance a case of foot-and-mouth disease in England before 1844; which, if so, would lead to the assumption that the disease was just brought to the country by the free importation of foreign cattle. He (Mr. Clark) was unable to speak on the subject at that time, but he had since seen that in 1840 Professor Sewell wrote an article in the Royal Agricultural Journal on the foot-and-mouth disease, which then existed in England. The disease was in Essex in 1839, it spread to Norfolk, and in 1841 cattle on a farm in Devonshire, belonging to his father, were attacked with it.

Mr. SPEAR stated that in 1840 cattle died from foot-and-mouth disease on a farm he was acquainted with in that neighbourhood, and the disease spread to his own premises.

Mr. SPRY knew it was perfectly impossible to slaughter all the store cattle brought into this country. He only framed his motion in order to provoke discussion, and would alter it in any way to meet the unanimous opinion of the Chamber.

Mr. S. ROSEVEARE was sure all store stock could not be slaughtered when landed, although something might be done regarding the fat stock. In support of the view that contagious diseases were imported into England he pointed out that the diseases were almost confined to localities near the landing ports. Fat cattle should be slaughtered at the port of debarkation.

Mr. N. STEVENS objected to the words in the motion to provide buildings for slaughtering cattle, contending that beyond providing that the slaughtering should take place, they need do nothing. The question of putting store stock in quarantine should be well considered before long periods of quarantine were advised. He blamed farmers for not attending meetings of chambers of agriculture, and there discussing their grievances, which was the only means they could take in order to get evils remedied.

Mr. CANN said the arguments against the great expense of putting store cattle in quarantine might be overcome, as a higher price would always be given for animals if the purchasers were sure they were free from the disease. Store cattle were as likely to spread the disease as fat.

The motion was ultimately put in the following terms and carried: "In the opinion of this Chamber the present rules and regulations under which foreign cattle are imported into this country are lamentably inefficient in operation as regards the dealing with contagious diseases, and this Chamber is unanimously of opinion that no method for dealing with such diseases will be effectual that does not include the compulsory slaughter of foreign fat stock at the landing ports, and the disinfection of the hides before removed."

It was agreed to adjourn the discussion regarding the best means of dealing with imported store cattle to the 4th of January next.

THE LEEDS FAT CATTLE SHOW.

This annual show was held in the cattle sheds, Leeds. Coming after Birmingham, Islington, and York, this has always a special interest attaching to it from the meeting of "stars" for a final performance before they retire from the stage, to appear again only in the Christmas shambles. The entries gave assurance that in this point of view the show would continue to maintain its character, and it has happened so. Many battles have been fought over again, several important decisions have been reversed, and some "new Richmonds" have come into the field, and established themselves as worthy of public honours. The attendance too has been equal to that of last year, and far in excess of previous years. On the evenings of all the days the avenues were crowded with spectators, the daily average of admissions being about 8,000. Still the meeting has not been as brilliant as heretofore. The gaiety and *esprit*, were usually marked characteristics of the Leeds meeting were absent. Smith's model band discoursed sweet music, but the crowd seemed to move on calmly and unmoved, as though it was business *only* to-day and not pleasure. And truly it was so. It was not a time for pleasure; a terrible anxiety weighed on all men's spirits, and each countenance was the reflex of his sorrowful heart. The question of "What is the latest from Sandringham?" was the preface to every conversation—points, quality, wool and feather.

As a farmer, breeder, and sportsman, the Prince has become familiar with Yorkshire and Yorkshiremen—as, indeed, with Englishmen generally—while his kindness of heart and urbanity of manner have made him personally loved by the populations amongst which he has moved so freely. The demonstrations of this love for the suffering Prince shown by the masses on this occasion, were strikingly evidenced in many ways; but there was one which we cannot omit to record as showing how slight is the hold which Republicanism has yet obtained over the heart of England. Thus, when the band, instead of playing the National Anthem, on closing for the night, gave "God bless the Prince of Wales," the whole crowd surged, rather than moved individually, to the orchestra, and gave enthusiastic demonstrations of loyalty, some cheering loudly, some waving handkerchiefs, and some throwing up hats, but all joining in the chorus, '*God bless the Prince of Wales!*' Surely never prayer came forth more spontaneously than this, as none could be more heartfelt.

The many empty stalls amongst the cattle, arising from the prevalence of foot-and-mouth disease was a disadvantage common to all the shows of the season, and Leeds was especially fortunate in bringing so many public animals into the yard, safe and well. Out of an entry of 91 cattle, about 20 were unable to put in an appearance. Of course only about a moiety of these were prevented coming by disease. Several beaten animals are usually wisely held back by their owners, from shows that occur later in the season.

The Shorthorns were in three classes, and numbered 24. The competition was good in all, but remarkable in that of oxen. There was the tournament of the season, the meeting of Greek with Greek. Hector dragged over the course by Achilles; the fall of Front de Beuf before the Black Knight; Brian de Bois Gilbert pale at the touch of Ivanhoe's lance at Temple Stow; and Robin Hood's thrashing by the Pindar of Wakefield, were results of the "tug of war" no more expected than the defeat of the Birmingham and Smithfield Cup ox, and Lord Zetland's York Cup ox, by Mr. Drysdale's York third-prize ox.

We described Lord Zetland's ox at York last week. We have seen him again, and though he has lost bloom since then, he is still a fine Shorthorn, and entitled to beat Mr. Drysdale's red ox. Lord Zetland's ox may be a little light forward, and not stand as wide as Mr. Drysdale's, but he has style, hair, and touch, wonderful loin and back ribs, to which the red ox has no claim. The Scotch animal, moreover, cannot be a Shorthorn, if judged by looks. He has little of the character of the breed. He has no beef comparatively on his back and loins, is rough on his rumps and on his chine. He is thick-fleshed and a capital weigher, and a butcher may think him entitled to beat the Smithfield and York animals. Few breeders will confirm the verdict. The remarks that apply to Lord Zetland's ox apply more fully to Mr. Stratton's white, placed second here. He is better than the winner immeasurably, and better than Lord Zetland's entry. The two white animals are equally full of Shorthorn style, handling, and shape; but the south country beast beats Lord Zetland's in the forequarter and in the thigh, and is on the whole a more level beast. Lord Zetland's ox has loin and back ribs so excessively good that they make his outline not perfect. The defeat of the two best Shorthorn oxen of Birmingham, Smithfield, and York is simply a *fluke*, for which somebody is accountable, but by which nobody will be misled. The best cow was Mr. Cattley's second prize York animal. We described her last week. She is full of quality, and in some points better than Mr. Willis' big old cow. They do not, however, meet at Leeds. Mr. Outhwaite's cow was a good second. The heifer class was a creditable one of six. Sir W. Trevelyan here followed up his York success with the heifer bred by Mr. Stamper, which we characterised as about A. I. on the ground, and which on that occasion took the prize, and also Mayor's Cup, as best Shorthorn in the yard. The York placing is carried out in the second prize also—this going to Lord Zetland. The third prize does not follow; Mr. Robson's York entry being here beaten by a very neat, thick animal belonging to H. F. M. Ingram, Temple Newsam. Mr. Robson's young heifer is not nearly up; she will go on, and come another day. Mr. Drysdale's red ox takes the President's Cup for best animal on the ground, and Leeds Innkeepers' Plate for best Shorthorn. The judges are, it appears, at least consistent, if not something more, it being certainly consistent to make the animal beating the Smithfield and York "best beasts" win the plate for best Shorthorn animal here; but it may possibly seem to some not so much consistent as persistent (in error?) to give that animal the cup as the best animal on the show-ground. The premium for the best cross-bred ox or Irish ox went to Scotland. Mr. Bruce's first prize is a fine cylindrical mass of beef, somewhat coarse in bone. Mr. McCombie's red ox, the winner at York last week, is third. We then fully described him as a very heavy good animal. He is somewhat coarse on the shoulder, but weighs at least 110 stones, and is as level as a table on back and sides. Mr. Ripley's ox, which obtains second, is a first appearance this year, and though he is a good animal and has ribs, hips, and loins thoroughly covered, is deficient at the breast point, and not nearly equal to Mr. McCombie's ox in depth and breadth as a fat ox. This class is here first-rate. Mr. Bruce's ox, the winner in this class, takes the cup for best beast in the cross-breeds classes. Sir W. C. Trevelyan, Mr. H. M. Ingram, and Mr. Reid take the

crossbred heifer prizes in their order. Sir W. C. Trevelyan's animal is large and level, and full of quality, and fairly beats Mr. Reid's York second-prize animal, who now takes third. She is common looking in bone; and is down in back and belly. The Scotch classes were not well filled. The four classes had only 14 entries. Here York was really repeated. Mr. Reid's polled ox and heifer took first in their respective classes, Lord Harewood also taking first and second with Horned Highlanders, as at York. A second inspection justifies us in stating that this winner is one of the best Highlanders ever shown. Mr. Harrison's two heifers are first and second at Leeds, as at York. "Such a pair" are seldom seen; and we credit the Highlander most cheerfully with the guerdon of success.

In the tenant farmers' classes there was a capital competition, the entries being 38 in four classes. Mr. Pulver's second prize at York was here best ox, Mr. Tasker, of Naburn, taking second with a good animal, the first prize district ox at York; and Mr. Lancaster's third prize ox on the young class takes same place here. Mr. Tasker takes first in the cow class for tenant farmers with a long, heavy animal, and Mr. McCombie wins the second. In the heifers the first prize was won easily with Mr. MacPherson's 2 yrs. 10 months' heifer, the winner in cross-bred heifers at York. The second prize went to Mr. Sharp, of Kettering, and the third to Mr. Ripley, Kirk Hammerton. The prize animal is a pretty animal with a dark nose, and Mr. Ripley's young heifer is full of quality, but not good in the loin. Mr. MacPherson's heifer takes the cup for best animal in the tenants' classes, and no one can grumble at such an honour being awarded to her. The fat cow in milk prize went to Mr. Drake, Leeds, for a great good cow in milk and beef. She took also a £5 cup in this class. There were 17 entries, and nearly all came to the post, and close competition ensued. A cow that can milk and keep up condition is a valuable animal; but this can do more—she can make milk and meat simultaneously. The second prize went to Mr. B. Bird-sall, Woodhouse, Leeds, and the third to Mr. Shepherd, Leeds, for two capital Yorkshire cows.

The show of sheep was, on the whole, in numbers rather scant; but there were some prime animals brought out. In the horned Scotch there was a great competition as well as a good one. Mr. Jas. Bruce, of Fochabers, N.B., took first and second with the best animals of this class which we have met with this year. Lord Crawford, Lord Grantley, Mr. Crossley, Mr. Bridon, and others sent some well-fed blackfaces. In cross-breds Mr. Bruce also came first, beating Mr. Agar's York prize animals. In "Downs and other breeds" Lord Wenlock, who was beaten by Lord Zetland at York, turned the tables, and took first honours, leaving Lord Zetland the second prize; but Lord Wenlock's prize sheep were better than those he exhibited at York. The Leicester or longwool class produced but one entry, as at York, but that entry was a marvellous good one. Indeed, Mr. Byron's three Lincoln wethers were worthy of the prize and the cup for the best pen of sheep on the ground, which, in the face of such doughty champions as the two noble lords, they obtained. They alone fully sustained the honour of the longwools against all comers. We think we never saw better longwools, but certainly never better sheep of any other breed.

The pig show comprised 75 pens in 9 classes—a number ensuring a good competition generally. In some classes there were a dozen capital animals. We are not going to attempt to describe the points of prize pigs. The work is in vain. They are now moulded to shape, and the best individuals are types of large numbers of the same shape and make. Fat

is their normal condition, as we find them at the cottage homes of the West Riding, and fat they are at the pig shows. Sleekness is their beauty, and somnolence their habit, and when they have attained both they become prize takers! And on this occasion Messrs. Duckering and Sons, Mr. Bramfel, Mr. Ambler, and Mr. Clement Beswick Roysds have brought out specimens worthy of their high standing as breeders of the useful animal. In the farms and cottages of the West Riding, however, Competitors have not been found wanting, to compete, and successfully, against the swell breeders. Mrs. Mary Wilson, Richmond Hill, Leeds, takes first prize for middle-bred fat pig, and Mr. Joseph Bartle, Hunslet-road, Leeds, for one of the same breed exceeding 12 months old. Mr. Geo. Cochrane Seacrof gets a first for small-bred fat pig, and Mr. John Ballance, Britton-terrace, Hulton, Leeds, has the first-prize sow, small breed; while Mr. Henton, Leeds, wins the first prize for three pork-pigs. Mary Wilson and other locals get several more lower prizes, and the crack breeders have many seconds and thirds where the local breeders take firsts. Messrs. Duckering and Son have first and second for fat pig large breed, second for fat pig middle-bred, under 12 months, where Mr. Bramfit comes in. Messrs. Duckering also get first prize fat sow, middle breed, and third for small breed under 12 months old, as well as third for fat sow, small breed. Mr. Ambler, Mr. Roysds, and Mr. Bramfit have also their successes.

The poultry show comprised 411 pens in 41 classes, an average competition of 10; and pigeons 248 in 17 classes, an average of 15. Rabbits numbered 47 in 5 classes. The popularity of these fancy animals in Yorkshire is only equalled by the skill which is brought to bear in their cultivation. The success of these breeders has been commensurate with the pains taken, and the value of the "pets" has increased in the same ratio as their excellence; £100 for a game bird is the sale price in many instances put down in the catalogue, and 50 gs. for a pointer pigeon is no uncommon thing to see in the same list. To those who are interested in these minor breeds of domestic pets, this show has at once been a treat and a school of instruction. Our limits will not allow us to say more than this. To attempt to point out individual merit would be injustice, where that merit is so great and so varied that it cannot be fully illustrated by a single pen. Let us not forget a very important item in the story of the Leeds Cattle Show. The Judges were—Fat cattle and sheep: Mr. James Dixon, Berwick-upon-Tweed; Mr. Edmund Parker, Newton, near Castleford; Mr. Wilkinson, Shearwater, Hull. Pigs: Mr. Peter Eden, Salford, Manchester; Mr. George Smart, Woodhouse Grange, Aberford, South Milford. At York last week the judges were—Cattle: Mr. W. Hill, of Wetherley, and Mr. T. Scott, of Grantly, Ripon; of sheep, Mr. G. Walmsley, of Rudston, Bridlington, and Mr. W. Wood, of York; of pigs, Mr. R. Fawcett, of Osbaldwick, and Mr. J. Shilleto, of York.

FAT CATTLE SHOWS.

WEST OF ENGLAND FAT CATTLE AND POULTRY SHOW.—This show opened at Plymouth, and Somerset breeders have been very successful with their variety of Devon cattle. In the young steer class Mr. Walter Farthing took first prize for a beast bred by himself. In the old steer class he had their honours with a three-years and nine months' animal, bred by Sir A. Hood, St. Audries Williton. In the class for heifers not exceeding four years Mr. Farthing was first with a two years and five months' beast, and with the same animal he won an extra prize, for the best cow or heifer bred and fed by exhibitor. In the Shorthorn classes Mr. W. H. Hewett, of Norton Court, Taun-

ton, obtained the first prize in the steer class under three years and three months with a steer two years and eight months old, bred by himself. Mr. J. S. Bult, of Dodhill, Kingston, Taunton, ranked second with a two years and nine months' beast of his own breeding. In the extra stock classes Mr. Farthing again came to the front. In the oxen or steer class he showed the Shorthorn which has taken second prizes at Islington and Birmingham this year, and this ox now took a special prize of 10 gs. for the best ox or steer in the yard. In the cow and heifer extra class Mr. Farthing had it again all his own way, taking the first prize of the class, and also 10 gs. given for the best cow or heifer in the yard. This animal is a Devon cow, four years and three months old, bred by exhibitor. The poultry exhibition was very good. The dinner was put off in consequence of the illness of the Prince of Wales.

THE LIVERPOOL FAT CATTLE SHOW.—Amongst the cattle was the heifer belonging to Her Majesty the Queen which took the first prize at the Smithfield and Birmingham shows; and a Devon heifer, the property of His Royal Highness the Prince of Wales, but owing to the present circumstances they did not enter for competition. In class 1, for the best ox of any breed, the first, second, and third prizes were carried off by an Irish bred ox. The first and second prizes were awarded to Mr. McCombie, M.P., Aberdeen, for the best polled or Aberdeen ox; whilst Mr. Riggs, of Kirkeudbright, took the first and second prizes for heifers of the same breed. The first, second, and third prizes for best cow, any age or breed, were taken by an Irish bred cow; as were also the first, second, and third prizes for the best heifer of any age or breed. Mr. Riggs took the first prize for the best heifer, of any age or breed, fed in England or Scotland. Ireland also took the first and second prizes for the best pair of out-fed oxen; and the first, second, and third prizes for the best pair of out-fed heifers; and the first, second, and third prizes for the best pair of out-fed cows. The first prize for the best pair of oxen was awarded to a pair from Ireland; and the first, second, and third prizes were likewise taken by the best pair of cows, which were bred in Ireland. The first, second, and third prizes for the best pair of heifers were also taken by an Irish-bred pair. The first and second prizes for the best pure-bred Shorthorn heifer were also taken by Irish heifers. The show of sheep was good, and in this, as in the show of cattle, the greater number of the prizes were awarded to Irish breeds. In fact, out of a large number of pens only two prizes were awarded to English pens.

TREDEGAR AGRICULTURAL SHOW AT NEWPORT.—Wednesday was this year the chief show day, the interest on the first day being centered in the horses. There were seventeen entries in the light weights, but only eleven came forward. The first prize was won by Col. Lindsay's May Queen, and the second by Mr. Mansfield's The Lamb. There were 143 entries in the cattle classes, amongst which there was a short show of Herefords. There were only two entries for the silver cup for the best yearling bull of the Hereford breed, and Mr. Rees Keeme, Pencreeg, Caerleon, was awarded the prize, but no small dissatisfaction was expressed at the decision. For the cup given for the best yearling heifer Mr. J. Morris, of Madley, showed a Hereford heifer, which took the second prize at the Wolverhampton meeting of the Royal Agricultural Society, and was one of the pair that took first prize at Hereford in October, but was here beaten by a Shorthorn, a little gem. For the cup for the best stock bull above two years old there were six Herefords and seven Shorthorns exhibited, among them the Hereford Dulas, and a Shorthorn shown by Mr. G. Garne, of Chipping Norton. The premiership was awarded to the Shorthorn. The plate of 20 guineas for the best male animal in the yard was awarded to Mr. Warren Evans's bull Monaghty 3rd, who was also awarded the prize for the best bull with cow and offspring. There were only thirty entries in the sheep classes, which would seem, by the way, a small number for a show of this standing. The bulk of them came from Glamorganshire. Only two pens of Welsh mountains were shown, Breconshire furnishing one and Monmouthshire the other. Pigs were represented by 46 entries, and were pretty equally distributed over a large area. Newport has done very well in securing prizes for these useful animals. The horses numbered 124 entries. Many of the prizes this year had very large numbers of competitors, and in some cases

there was difficulty in awarding prizes, so keen was the competition.

IPSWICH FAT CATTLE SHOW.—The prize for the best fat pure or cross-bred steer, under 30 months, was taken by Mr. Green, of East Donyland, with a very fine animal, weighing over 80 stone. The crack beast in the next class (over 30 months) was Mr. Frost's fine four-year-old Shorthorn, which took the first prize, beating Mr. J. J. Colman's polled steer, the second-prize winner in the Shorthorn class at Smithfield, with which the competition was very close. The heaviest bullock in the class was that exhibited by Mr. Woods, of Oulton, Lowestoft, a winner at the Mutford and Lotheringland show last summer. In the next class (fat heifers, pure and cross-bred, not exceeding four years old) Mr. Green was to the front again with a pretty little white heifer, but rather deficient in the hind quarters, a first-prize winner at the Essex show at Romford. The premium for the best fat cow was taken by Mr. N. Catchpole, of Ipswich, with a handsome animal, winner of the first prize at Beccles, second at Sudbury, and second at Ipswich in 1869. The "any breed" class was a very poor one, the only beasts worth looking at being a couple of stalwart Highlanders, whose claims were, however, ignored in favour of Mr. R. Cooke's Shorthorns. The four Shorthorns shown by Mr. G. Symonds, of Botesdale, for the £10 cup, were splendid, both for size and symmetry. In addition to the ordinary prizes, the president offered a special prize of £10 10s. for the best beast in the yard, Messrs. Webber, Hedge, and Co., supplementing this excellent premium by a ton of their best oilcake. The judging of the different prize animals for the blue ribbon of the show was watched with great interest. The competition by between Mr. Frost's (Wyvenhoe) old Shorthorn and Mr. Green's younger animal. Eventually the judges gave the award to the older and heavier beast. Sheep: The show of sheep was the best we have seen in Suffolk—considerably superior to that at Beccles in the summer. For the best pen of short-wooled sheep under 23 months there were nine entries; the judges awarded the first prize to Mr. Charles Boby, of Stutton. Mr. Overman was first for short-wooled wethers over 23 months, and also took the prize for cross-breds under 23, so he had every reason to be contented. The prize for the best 20 fat sheep of any age or breed was won by a nice lot sent by Mr. J. Smith, of Hasketon. Pigs: Some fine porkers were on the ground, conspicuous among them Lord Rendlesham's two-year-old sow, which credited his lordship with both the five-guinea special prizes presented by Mr. A. Ogilvie for the best sow and the best animals in the yard.

THE MALTON CHRISTMAS FAT STOCK SALES.—The results of the sales held at the fortnight fair, by Mr. Boulton, last month, were as follow:—Bullock, belonging to the executors of the late Mr. John Scott (Mr. Walter Taylor), £42; bullock, belonging to Mr. Cadman, Broughton (Mr. Ewbank), £38 2s. 6d.; bullock, belonging to Mr. Fenwick, Swinton (Mr. Daek Grosmont), £63; five heifers, ditto, £125; two bullocks, belonging to Captain Copperthwaite, £52 7s. 6d.; bullock and heifer, belonging to Mr. Robson, Howbridge, £11 10s.; six heifers, belonging to Mr. Hudson, Howsham, £124 7s. 6d.; bullock and heifer, belonging to Sir George Cholmley, £58 5s.; two bullocks and one heifer, belonging to Mr. Miles, Heslerton, £63 7s. 6d.; two heifers and one bullock, belonging to Mr. Wilson, Whitwell, £79 10s.; two heifers, belonging to Mr. Wilson, Firby, £45 12s. 6d.; four bullocks, from Mr. Cook, of Thivendale, £107 12s. 6d.; one heifer, from Mr. Cook, of Sutton, £29 15s.; two heifers, from Mr. Smith, of Mowthorpe, £64 10s.; also upwards of twenty fat beasts, from £14 to £18 each.

PENRITH ANNUAL FAT STOCK SHOW.—This annual show was held at the Agricultural Hall, when the whole of the animals exhibited were of a superior character. The following are the principal prize winners:—For sheep, the Earl of Lonsdale, Messrs. H. M. Frazer, J. C. Lancaster, J. R. Bridson, L. Harrison, R. Thompson, Captain Gandy. For cattle, Messrs. G. C. Wilson, Lewthwaite, J. Birkett, T. Hunter, Sir George Musgrave, and Mrs. Ann Speak. The total amount realised by the sale of the competing sheep was £1,033 16s. 3d., or an average of 71s. each; and 54 prize cattle realised £1,926 5s., an average of £35 13s. 5d. each.

THE FARMERS' CLUB ANNUAL DINNER.

The annual dinner took place on Tuesday, December 5, at the Salisbury Hotel. About 100 gentlemen were present, the chairman of the year, Mr. J. B. Spearing, presiding, while Mr. H. Cheffins, the chairman of the Club for next year occupied the vice-chair. The dinner itself was worthy of the growing reputation of the Salisbury, being altogether of the best quality, and admirably served. The musical arrangements, which were very satisfactory, were under the direction of Mr. Seymour Smith, who was assisted by Mr. Dawson and Mr. R. Mason.

The CHAIRMAN, in proposing "The Queen," observed, that at this period, when all supposed defects were so freely discussed, it was satisfactory to know that they lived under a monarch, who was at once popular and powerful—powerful, not so much because she ruled over a vast empire, as because she reigned in the hearts and affections of a loyal people, and did not wish to deny liberty of speech even to those who desired to overthrow the Throne and the Constitution.

The toast was drunk with great enthusiasm.

The CHAIRMAN next proposed "His Royal Highness the Prince of Wales, the Princess of Wales, and the rest of the Royal Family." He congratulated the company that the most recent bulletins with regard to the heir apparent were satisfactory, and warranted the hope that ere long His Royal Highness would be restored to his usual state of health. They all knew that the Prince took the greatest interest in agriculture, as evidenced by the excellence of the animals which he exhibited at Birmingham, and now at the Show at Islington.

This toast having been cordially responded to, was followed by that of "The Army, the Navy, the Militia, and the Volunteers."

The CHAIRMAN then said: Gentlemen, I have now to propose what may be considered the toast of the evening, viz.: "Success to the Farmers' Club—and thanks to those gentlemen who have read Papers during the past year." This Club has now existed for 27 years, and it is now, not merely holding its own, but gradually increasing in numbers, in influence, and in funds. During that long period many old and familiar faces have passed away from us, and it is a painful duty for the chairman of each year to record the names of some of those who have since the last annual meeting been removed by death. On the present occasion I have to mention the names of Lord Berners, Mr. John Clayden, Mr. George Jackson, Mr. Edmunds, and Mr. Richard Stratton—men who were well known in this Club and duly appreciated by us all. The duty which I have undertaken of proposing this toast is not an arduous one, because, as will be seen from the report submitted by the committee to the members at the annual meeting, the Club is in a very satisfactory and flourishing condition. The subjects which have been discussed during the past year are of a most interesting and practical nature, and I am sure that the thanks which I propose to the gentlemen who introduced them will be most freely accorded. In February we had a discussion on "English Cheese Factories—how to establish and how to manage them," introduced by Mr. J. Coleman; in March, on "The Supply of English Cavalry Horses," introduced by Mr. E. Tattersall; in April, on "The Growth of Cabbage and kindred crops," introduced by Mr. Clement Cadle; in May, on the question "How to Hire and How to Let a Farm," introduced by Mr. Mechi; in November, on "The Agricultural Labourer—his Employment, Wages, and Education," introduced by Mr. Clare Sewell Read, M.P.; and last night we had a discussion on "Breeding—Facts and Principles," introduced by Mr. J. K. Fowler. I earnestly hope that many of our younger members will, before the meeting of the committee in January, send in proposals for subjects of discussion next year; for unless we keep on importing young blood and getting fresh subjects of interest to agriculture, we shall not, I fear, be enabled to maintain the usefulness of the Club; while if my suggestion be acted upon, there may be an equally good account to be rendered at the end of next year. In looking back to the discussions of former years I have

found that there is scarcely any important question connected with agriculture which has not been considered; and I think, therefore, it must be admitted by all that the Club has been doing useful work, and has deserved well of the country. There are, indeed, some persons who appear to think otherwise, perhaps because they expect too much from the Farmers' Club. For instance, if a man takes a farm that is overstocked with game, or has insufficient cottage accommodation, or is too highly rented, or is encumbered with a lot of absurd covenants, which when he agreed to them he knew he could not perform, he thinks, perhaps, that the Farmers' Club ought to reform all that and release him from his difficulties by an appeal to the Legislature. I say that that man is expecting too much from us. If one thing be more required than another in tenant farmers as a body, it is that they should be true to themselves (cheers). If we are not true to ourselves we can do no good either for ourselves or for our landlords, and I may add that in all such cases the landlord is the first to suffer in the long run. Gentlemen, I will not detain you by making a long speech. I have said what I had to say, and now propose the toast (loud cheers).

The toast was drunk with cordiality.

Mr. A. PELL, M.P., said it was not without some feeling of regret that he rose to propose "The Chairman," as that duty was assigned to him in consequence of the unavoidable absence of one to whom it had usually been confided; he need scarcely say that he alluded to their excellent friend—a friend of long acquaintance, and an old member of that Club—Mr. Clare Sewell Read. Mr. Read had a sharp attack of what he called his "old enemy bronchitis," and he was sorry to say that it was not unlikely that he would not be well enough to come up to town that week. He was not ashamed to confess that in his public capacity he had to some extent looked upon Mr. Read as his master, feeling that he could hardly be wrong in following in his steps, and taking his advice when he required the opinion of a second person for his own guidance; and he hoped that his friend would soon again come forth in public with renewed health and strength. In an assembly like that, which comprised men who ranged themselves, some with one and some with the other of the two great political parties in the kingdom, he must be careful not to make any remarks in a Conservative or Tory spirit. He could not, however, help observing that the two old parties into which the country was entirely divided up to a few years ago—he meant, of course, the Whigs and the Tories—seemed now to be resolving themselves into other forms, and would soon be, if they were not already to a great extent, the communist or town party on the one side, and the party connected with real estate and rural life on the other. He might assume, he thought, that all the members of that Club, being connected in some way with the management or cultivation of the soil, must be practically, in the common sense of the word, countrymen, in contradistinction to those who were termed townsmen; and he was reminded that two-thirds of the members of that Club must belong to the vocation of agriculture in order to give it that distinct character which entitled it to the name of "The Farmers' Club." That being the case, he thought that without giving offence to the greatest Liberal in that room or running into the extreme of Toryism, he might congratulate the Club on the position which agriculturists as a body occupied as a useful auxiliary of the cause of good order and stable Government. It had been repeatedly stated that the occupiers of the soil were slow to approach new ideas, and that it was very difficult to get them to assent to any improvement because they were bigoted in favour of whatever was old. It did not follow that an idea was bad because it was old. He would take leave to assert that farmers as a body were ready to adopt new ideas both with regard to the manner of conducting their own business and with regard to public affairs, when they could be proved to be sound; but on the other hand, he must confess on their behalf that it would be difficult to eradicate from the

minds of the cultivators of the soil the idea that the present form of government in this country was practically the best form that it could possess (loud cheers), that a greater amount of true liberty was to be found in this happy island than in any country on the European continent or elsewhere; and that Republicanism might set up a greater tyrant, or impose a greater amount of tyranny than was ever seen in connection with the greatest despot or despotism that ever oppressed human beings. The tyranny of enormous majorities in large towns—and he wished to keep distinctly in view the difference between town life and country life—might, in his opinion, be more galling than that of any single despot that ever ruled a country; and he believed that the class to which he belonged, and which was well represented at that table, if not so valuable as some other classes, was quite as likely to aid in preserving and encouraging real liberty and useful development (cheers). It might be that they were slow speakers and slow thinkers; but that arose perhaps from the nature of the occupation in which they were engaged. If they were as yet a minority (cries of "No, no") they were an increasing minority; they had a great state in the kingdom, and as an English minority, living under the English monarchy, they claimed to take their position side by side and on equal terms with the greatest majority. As regarded their chairman, he wished to observe that, having gone through the list, he found that there were only thirty-three members who were older as regarded the date of election than their present chairman—a fact which alone entitled him to favourable consideration (cheers). The chairman, however, had rendered great services to agriculture, not merely in that Club but elsewhere. It was now something like nineteen years ago since he first appeared before the public as a writer, and a successful writer, on a subject which was then comparatively new to agriculture, namely, the relative advantages of steam as a motive power in agriculture. A prize having been offered by the Royal Agricultural Society of England for the best essay on that subject, it was competed for by many good men and the chairman was the successful competitor. He could not tell them how many times the chairman was unsuccessful between 1852 and 1860—that he probably kept in his own breast (laughter); but in the latter year he obtained from the same Society the prize which it had offered for the best essay on the agriculture of Berkshire. In 1863, when Mr. Bradshaw was chairman of the Club, Mr. Spearing read before that Club a good paper upon the effect of climate on cultivation; and in 1868, when Mr. Clare Sewell Read occupied the chair, he read another excellent paper on the controverted education question. By those four productions he certainly well entitled himself to fill the position which he had occupied with so much success, and in which he had manifested so much kind and gentlemanly feeling during the present year (cheers). Further, for ten years consecutively he had been one of the judges at the Birmingham show—a fact which showed that he was a good practical man as well as a good theorist and a successful writer of essays. Much, however, as he admired the chairman, he should like to see younger heads coming forward as writers and speakers. New ideas were not to be expected from comparatively old men; there was much scope for usefulness in young men apart from their farms and attention to their own business; and if the Nestors of agriculture, and those who seemed to many to adhere to the old rule of thumb, were leavened, as it were, by the influence of the leaders of agricultural thought, there would then be a very good mixture. He now proposed the health of their chairman, Mr. Spearing (loud cheers).

The toast was drunk with the honours.

The CHAIRMAN, in returning thanks, said he could only account for his own selection for the office which he filled, by the fact that the Club had had such strong chairmen for two or three years, that it was thought that a very moderate one would do for one year (laughter).

Mr. J. BROWN proposed "The Royal Agricultural Society of England, the Highland Society of Scotland, and the Royal Agricultural Society of Ireland," coupling with the toast the names of Mr. Masfen and Mr. Garnett, the latter gentleman for the Irish Society. There could be no doubt that all the great agricultural societies were doing useful work in their several spheres. The Farmers' Club supplied a very important want, and no one would attend its discussion meetings without taking back to his own district some useful

ideas. The Royal Agricultural Society periodically planted its standard in some distant part of the country, and diffused most valuable information among farmers; and if it had failed to fulfil all the purposes for which it was established, it was their part to criticise it in a friendly way, and to seek to get it amended where amendment was required.

Mr. MASFEN, in returning thanks for the Royal Agricultural Society of England, said he did not envy the feelings of that man who thought that he lost a day by attending one of the annual gatherings of either of the Societies included in the toast. He believed that the good effect of the meeting in South Staffordshire would be seen for many years; and with regard to the local subscriptions, he was happy to be enabled to state that the £8,000 required for expenses was made up, and that there was a surplus remaining to be disposed of. At the discussion of the Farmers' Club meeting on the previous night, Mr. Congreve complained that gentlemen in his position had great difficulty in getting animals for grazing purposes. Formerly there was one class of men who bred, and another class who fed; but during the last few years meat had reached such a price, that men who bred had thought it worth their while to bring their animals to maturity, and instead of selling to men like Mr. Congreve, they sold to the butcher. As regarded the Highland Society of Scotland, having been one of the judges at its last annual show, held at Perth, he was happy to say that it was a very creditable one, and that there were a great many animals that would have done credit to a show of the Royal Agricultural Society of England or any Society in the world (cheers).

Mr. GARNETT said, as a member of the Royal Agricultural Society of Ireland, he could testify that although only in its infancy as compared with some other Societies, it was a great success, and any one who visited the show last August, at which the Prince of Wales was present, must have felt satisfied that Ireland was not in such a wretched state as some people in this country had represented it to be. Having had 50 years' experience of Irish agriculture, he could declare that the people of that country when treated with justice and firmness—for it was these that were wanted—were not as bad as they were described. He had no wish to touch on political questions, but he could not help saying that as the Irish difficulty had upset many a Government in past times, so he believed that when the present Government came to deal with the education question, they would find themselves upset too. His belief was that although there were in Ireland a few visionary creatures like Sir Charles Dilke, the country would continue to improve, and be in the end firmly united with England, and that Irish farmers would profit by the example of English farmers (cheers).

Mr. H. TRETREW proposed "The Vice-Chairman, Mr. H. Cheffins," one of the oldest members of the Club, and one who had rendered great service to it in many capacities; and he congratulated the company that that gentleman would be the Chairman during the ensuing year. He (Mr. Tretrew) did not concur in the opinion just expressed by Mr. Masfen in reference to the complaint made by Mr. Congreve in the discussion of the preceding evening. No doubt breeding farms were grazing farms; but he did not believe the scarcity of animals complained of by Mr. Congreve was owing to the cause supposed.

Mr. H. CHEFFINS, in returning thanks, said, although he might not be an efficient chairman, he would promise to do his best, and, considering the benefits which he had received through constant association with many of its most distinguished members, he would be ungrateful indeed if he did not endeavour to obtain the approval of the Club. In conclusion he proposed "The Smithfield Club," and spoke of the vast and increasing good which it was conferring on agriculture and the country.

Mr. T. HORLEY, in responding, said no one could deny that the Smithfield Club had conferred great benefit in introducing a better quality of meat than the public could command before it was established. It was an unfortunate circumstance that the foot-and-mouth disease had shown itself in some of the animals sent to the Show; but he thought the Club wisely determined to defer any further action in the matter until February. The disease was now so rife, and had become such a universal epidemic, that some persons thought it should be stamped out as the cattle-plague was. He himself believed that the half-measures at present in operation had no ten-

deney whatever to check the disease, while they were certainly a great hindrance and annoyance to numbers; and unless the owners of stock and the public were prepared to revert to the rigid regulations adopted in the case of rinderpest, he could see no end to the evil.

Mr. KILPIN proposed "The Committee of Management," coupled with the name of Mr. Major Lucas.

After a cordial response to the toast,

Mr. LUCAS said he was proud of belonging to the committee, because so many of his colleagues had rendered great service to the Club. While they took leave of their worthy chairmen that day with regret, they looked forward to the coming one with congratulation (cheers). But however excellent the chairman might be there always sat at his side a gentleman who had always been a most useful and efficient officer of that Club, and he had now, not the task, but the pleasure of proposing the health of their worthy Secretary, Mr. Henry Corbet (cheers). He was sure they would all join heartily with him in wishing health and happiness to a gentleman who had done so much to promote the prosperity of the Club, and who had for so many years performed his duties in an able and satisfactory manner. He knew from observation that Mr. Corbet was an anxious and a jealous Secretary—anxious for the continued usefulness of the Club, and jealous for the interests of agriculture; and he hoped that he would live for many years to promote the interests of the Club in the same astute and successful manner as he had done in the past.

The toast having been drunk with the honours,

Mr. H. CORBET said as the Secretary of that Club he begged to return thanks for the honour which had just been conferred upon him. That was, he was proud to say, the twenty-fifth occasion on which he had had to perform that duty. Holding the position that he did, it might more properly be in his province to speak to the history and position of the Club. He had no explanation to make, no excuses to offer. The report of the committee presented at the annual meeting of the members that day showed that, whether socially or publicly, the position occupied by the Farmers' Club had never been better than it was then. The balance-sheet, audited by gentlemen who were quite independent of the committee, proved that the finances of the Club were never in a better condition. He had that evening heard some encomiums passed on that Club, and on some other institutions of a kindred character. He believed there was no institution which had in its sphere done more good to agriculture than their own. Last year it was his happiness to refer to a colonial newspaper in which a gentleman said that he read the discussions of that Club with more pleasure than he felt in reading the debates of the Legislature of his own colony. Within the last few days there had been a meeting in the Midland Counties of an agricultural Society, which in the summer held an exhibition of stock. That Society thought that during the winter season, instead of going to sleep like a dormouse, it could do better in holding discussion meetings. At the first meeting the chair was occupied by a member of the House of Commons, who spoke, in opening the proceedings, of the extended and extending influence of agriculturists, and referred especially to the beneficial influence exercised by that Club. He would not trust himself to repeat from memory exactly what that gentleman did say, but he believed he acknowledged that no agricultural institution had done more for the advancement and improvement of agriculture (cheers). He (Mr. Corbet) had no fears for the future of that Club socially or financially; what he did fear was lest they should not be able to sustain their programme of discussions. As each year came round he said to himself "What shall we do—what shall we put on the card?" Mr. Pell had spoken of the necessity of introducing young men, new blood, and new ideas. He could assure Mr. Pell that he had just received a number of subjects proposed for discussion, some of which would almost frighten him for their novelty. Looking to the past, Mr. Masfen had spoken of the necessity of greater security on the part of occupiers; and whenever gentlemen talked on that subject they invariably came back to this point—that it was absurd for persons to attempt to farm in the best manner unless they had proper security for the capital which they invested. That was a very honest and a very substantial principle, but it was a principle which belonged to that Club (Hear, hear.)

Through good report and evil report, through absurd abuse and faint praise, under all disadvantages and discouragements, Tenant Right had been advocated and contended for in that Club. After having dropped for a time it rose up again, and he believed that it was destined to ultimate success (cheers). His desire was to say as little as possible about himself and as much as possible about the Club; but he felt greatly obliged to Mr. Lucas for the handsome manner in which he had spoken of his services, and he sincerely thanked them all, individually and collectively, for the reception accorded to the toast (cheers).

The concluding toast was "The visitors."

The company separated soon after 10 o'clock, after spending one of the pleasantest evenings in the annals of the Club.

THE GENERAL ANNUAL MEETING.

At the general annual meeting on Tuesday, December 5th, Mr. J. B. SPEARING, in the chair, the following report from the committee was received and adopted:

A reference to the balance-sheet will furnish the best evidence as to the prosperity of the Farmers' Club, which well maintains its position. Although there have not been so many new members elected in 1871 as in 1870—the accession of strength being 46 against 56—the income is equal to that of the previous year, a fact which speaks to the larger amount of subscriptions paid up. The arrears, indeed, have never been more closely collected; although the committee is still surprised to find that a few members who make continual use of the Club neglect to discharge their obligations in this way, even after repeated applications have been made. If the income will compare favourably with that of previous years the expenditure has been kept well within bounds, and it is long since there has been a better balance at the bank. Some calls, however, will require to be met from time to time on the six additional £20 shares taken in the India Peninsula Railway Company.

Looking to the Club's uses and duties in another direction, it is satisfactory to say that the committee has been enabled to fill in the discussion card with subjects which have been so well-timed and handled as to again command much attention beyond the mere precincts of the Club. There is, indeed, no question but that more and more weight is coming to be attached to these meetings, and to any expression of opinion which may emanate from them. In some proof of this it may be mentioned that the International Decimal Association has sought the support of the Club in an endeavour to obtain some uniform system of weight, and the committee, from its past experience and communications with all the chief agricultural bodies in the kingdom, has been enabled to give its concurrence to a movement which may be almost said to have originated with the Club some years since. A full report of these proceedings has already appeared in the *Club Journal*. The committee has also given its best aid to the French Peasant Farmers' Seed Fund in calling the attention of the members to the object, for which at the outset the committee received an official vote of thanks from that society.

The committee has again to lament the loss of some of its most respected members, as the deaths during the past year include those of Lord Berners, Mr. John Clayden, Mr. George Jackson, of Tattenhall, Mr. Edmunds, of Rugby, and Mr. Richard Stratton. Mr. Clayden was a member of the committee, and, in accordance with rule 12, Mr. T. Horley has been nominated to fill the vacancy.

Mr. Henry Cheffius has been elected chairman of the Club for 1872.

The following members of the committee went out by rotation: T. Congreve, T. B. Dring, J. Dumbrell, C. Howard, J. Howard, M.P., E. M. Major Lucas, F. Neame, R. J. Newton, T. Owen, C. S. Read, M.P., J. B. Spearing, J. Thompson, and A. Voelcker—all of whom were re-elected but Mr. Dumbrell, who was ineligible from non-attendance, and Mr. J. G. King elected on to the committee in his place.

A vote of thanks was past to the auditors, and Messrs. T.

Willson, N. Rix, and E. Purser, jun., elected auditors for the ensuing year.

Mr. Allender gave notice that at the next general meeting he would move "That the attendances of retiring members of the committee be taken on an average of the three preceding years."

The proceedings closed with a vote of thanks to the chairman.

THE LATE RICHARD STRATTON.

More than thirty years ago, Mr. Stratton had a large herd of cattle in Wiltshire, which he kept in two parts; one numbering about fifty cows and heifers, as the ordinary dairy herd; the other about forty head, as the selected herd. Expensive cattle were never bought, but the best heifers were purchased at different fairs, and put into the ordinary herd, where if they proved good beasts and great milkers, their heifers were exalted to the selected herd, and if they in their turn became good milkers and breeders, and were worthy of the promotion, they were retained. In the selection of bulls, Mr. Stratton was most particular, and his custom was to spend a month or six weeks in looking over various stocks for the male animal, selecting him not so much for his great beauty and symmetry as his character, blood, and the excellence of his sire and dam. Phoenix (6290), originally called Byron, was the first pedigree bull, and he was put to a neat but rather plain red and white heifer, supposed to be a pedigree Shorthorn, which Mr. Stratton had refused at one fair and afterwards thought better of and purchased at Highworth. These animals produced Moss Rose, the best heifer calved that year; she afterwards became a prize cow, and on being put to Lottery (4280) (who was bought of Mr. Adkins, of Mileote) gave birth to Young Moss Rose, and mother and daughter produced thirty calves between them. It is from these animals that the largest and best portion of Mr. Stratton's herd has been reared; and although one or two pedigree cows have been bought they have not been retained. Upon good bulls he has chiefly depended: Mr. Hayter's Red Duke (8694), Earl Ducie's Hero of the West (8150), and Mr. Sanday's Nottingham (15014), being among his most favourite sires. Of late years, however, he bred much from the Booth blood through Mr. Barnes' herd, but he never went direct to Warlaby. He had no love for fashionable pedigree, and it was rather by his friend Mr. Bowly's advice that he sent his prize cow Maid of Honour to Seventh Duke of York, and her son the Eighth Duke of York (23808), with James 1st (24202) (a prize-winner by a Booth blood bull, out of Queen Mary, an own sister to Maid of Honour), have been the latest sires used. It is more particularly in the show-yards, and especially at the Birmingham and Smithfield Club Shows that his success as a breeder and exhibitor is so widely known. Since the modest 3 gs. were won at Devizes in 1837 for the best heifer in milk and for the best cow in milk, the amount has swollen to over £5,000, and five gold medals have come from the Smithfield Club alone. At the Royal and local shows he has frequently sold his animals at high figures, chiefly to Australia, where they have been most highly esteemed, and three of his bulls have realised in the colony 400 guineas, 470 gs. and 600 gs. respectively. Portions of his herd have, however, been brought into the sale ring, but no high prices obtained. At the sale in March last, it was remarkable that amid a very large company scarcely half-a-dozen *Herd Book* breeders were present, yet for the general herd of fifty-five head, most of the best being retained, an average of £34 was realised. In fact, Mr. Stratton, a sound, good judge of animal life, studied and practised breeding for the animal's sake more than for fashionable tastes; he went for sound constitutions, good quality of flesh, and abundant milking properties, and looked at a pedigree, not for its long descent, but to assure himself that the immediate ancestors were good, and of a family of good animals. If he were particular to certain points, he would prefer a good back, full thighs, large udder, and a good floor to the chest, as his friend the late Mr. Adkins described it, scorning animals with "no heart and long necks as good dairy cattle." He did not very strongly object to in-and-in breeding, though it was rarely practised; the cross in

Lottery on Lottery's daughter Young Moss Rose, producing Elegance, "a nice stylish cow, a great milker, but not so massive as her dam," was by mistake of the herdsman and not altogether an unsuccessful result, as she produced the Duchesses of Glo'ster, who in their turn produced Maid of Honour and Queen Mary. Eminently successful as an agriculturist, and a great economist in management, he brought out animals that have ranked in the show yards with the Booth, Towneley, and finest cattle of the day; backward as some have considered him, and forward as others have remarked, in his generation, he was nevertheless a man who commanded success, and who was looked up to by his brother farmers of the south as a man in advance of his time. He died on the 15th of August, aged 63 years, and left a large family of five sons and six daughters, one only a minor; the sons, following their father's pursuits, are large occupiers, the four eldest having 6,500 acres among them. Mr. Joseph Stratton, at Alton Prors, Wilts, and Mr. Richard Stratton, of The Duffryn, Monmouthshire, divide their father's herd between them.—*Thornton's Circular*.

ITS NOBBUT ME.

Ya winter neet, I mind it weel,
Oor lads 'ed been at t' fell,
An', bein' tir't, went seun to bed,
An' I sat be mesel.
I hard a jike on t' wi' dow pane,
An' detfly went to see;
Bit when I ax't, "Who's jiken thee?"
Says t' chap, "It's nobbut me!"

"Who's *me*?" says I, "What want ye here?"
Oor fwok ur aw i' bed,"
"I dunnet want your fwok at aw,
It's *thee* I want," he sed.
"What cant'e want wi' me," says I;
"An' who, the deuce, can't be?"
Just tell me who it is, an' than!"—
Says he, "It's nobbut me."

"I want a sweetheart, an' I thowt
Thoo mebbly wad an' aw;
I'd been a bit down t' deal to-neet,
An' thowt 'at I wad eaw:
What, cant'e like me, dus t'e think?"
I think I wad like thee"—
"I dunnet know who 't is," says I
Says he, "It's nobbut me."

We pestit on a canny while,
I thowt his voice I kent;
An' than I steall quite whisht away,
An' oot at' doerer I went.
I ereapp, an' gat 'im be t' ewoat laps,
'Twas dark, he cudden see;
He startit round, an' said, "Who's that?"
Says I, "It's uobbut me."

An' menny a time he com ageaun,
An' menny a time I went.
An' sed, "Who's that 'at 'a jiken thee?"
When gaily weel I kent:
An' mainly what t' seamm answer com,
Fra back o' t' laylick tree;
He sed, "I think thoo knows who't is:
Thoo knows it's nobbut me."

It's twenty years an' mare sen than,
An' ups an' doons we've hed;
An' six fine barns hev blest us beath,
Sen Jim an' me war wed.
An' menny a time I've known 'im steal,
When I'd yan on me knee,
To mak me start, an' than wad laugh—
Ha! Ha! "It's nobbut me."

—John Richardson.

REVIEW OF THE CATTLE TRADE FOR THE PAST MONTH.

The feature in the cattle trade during the past month has been the holding of the annual Christmas Fat Stock Market. The show of beasts on that occasion was tolerably good, but, although the general quality was excellent, it did not exceed expectations. In point of numbers the show was about an average; allowing for the many advantages offered during the past season for the rearing and fattening of cattle the appearance of the beasts was not worthy of any special remark. The Scotch grazers, as usual, carried off the palm, but there were excellent Shorthorns, Herefords, Welsh Runts, and also a few fair conditioned foreign breeds. The trade throughout has been in a rather quiet state. The best Scots and crosses have only occasionally made 6s., the more general quotation being 5s. 8d. to 5s. 10d. per 8lbs.

There has been a fair show of sheep in the pens. Although trade has not been active, a firm tone has been generally apparent, and prices have been fairly maintained. The best Downs and half-breeds have sold at 6s. 8d. to 6s. 10d., and in some instances 7s. per 8lbs.

For calves the inquiry has been to a moderate extent, at full prices. Pigs have commanded a fair amount of attention.

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	Dec., 1871.	Dec., 1870.	Dec., 1869.	Dec., 1868.
From Lincolnshire, Leicestershire and Northamptonshire.....	7,500	8,500	7,620	7,545
Norfolk, Suffolk, Essex, and Cambridgeshire	1,600	1,620	1,900	550
Other parts of England	1,390	1,830	2,480	2,330
Scotland	1,754	2,054	1,954	2,190
Ireland	400	1,820	2,990	1,292

The total imports of foreign stock into London during the past month have been as under:

	Head.
Beasts	6,308
Sheep	31,861
Calves	906
Pigs	215

Total 42,290

Corresponding period in 1870.....	51,888
" 1869.....	44,815
" 1868.....	17,231
" 1867.....	38,336
" 1866.....	34,658
" 1865.....	66,721
" 1864.....	41,712
" 1863.....	34,435
" 1862.....	25,435
" 1861.....	21,904
" 1860.....	20,795
" 1859.....	17,430

The total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month have been as under:

	Head.
Beasts	22,070
Sheep	93,310
Calves	1,028
Pigs	355

COMPARISON OF SUPPLIES.

Dec.	Beasts.	Sheep.	Calves.	Pigs.
1870	26,490	93,360	1,606	1,067
1869	25,689	94,170	1,946	680
1868	17,770	81,780	935	1,070
1867	21,910	92,490	943	1,880
1866	20,750	71,390	1,053	1,950
1865	31,720	126,170	2,823	2,930
1864	23,780	78,410	1,441	2,700
1863	29,302	85,470	1,150	2,680
1862	25,810	85,621	1,354	3,082
1861	24,840	84,630	701	2,950
1860	24,540	82,340	1,577	2,445
1859	24,484	78,987	1,171	2,187
1858	20,523	74,275	1,473	2,450
1857	19,830	67,132	1,209	1,915
1856	23,995	73,200	1,525	2,880

Beasts have sold at from 3s. 10d. to 6s. 2d., sheep 4s. to 7s., calves 4s. to 6s., and pigs 3s. 6d. to 4s. 8d. per 8lbs. to sink the offal.

COMPARISON OF PRICES.

	Dec., 1870.				Dec., 1869.					
	s.	d.	s.	d.	s.	d.	s.	d.		
Beef from	3	6	6	4	3	4	to	5	10	
Mutton	3	6	to	6	4	3	6	to	6	0
Veal	3	8	to	6	2	4	2	to	6	0
Pork	4	4	to	6	4	4	4	to	6	4

	Dec., 1868.				Dec., 1867.					
	s.	d.	s.	d.	s.	d.	s.	d.		
Beef from	3	2	to	5	8	3	4	to	5	2
Mutton	3	0	to	5	6	3	4	to	5	0
Veal	3	8	to	5	10	4	4	to	5	4
Pork	3	6	to	4	8	3	2	to	4	2

HOP MARKET.

BOROUGH, FRIDAY, Dec. 22.—The close approach of Christmas suspends operations, and no business of importance is passing. Prices continue firm, the quantity of new Hops unsold being now confined to a small compass. The Belgian market is quiet, with slightly easier quotations. Latest advices from New York state the markets have slightly improved, and prices for all grades, both new and old, to be extremely firm.

Mid. and East Kent	£10 0	.....	£12 12	.....	£16 16
Weald of Kent	8 10	.....	9 9	.....	10 10
Sussex	7 5	.....	8 0	.....	9 9
Farnham and country ...	11 0	.....	13 0	.....	16 0

YEARLINGS.

Mid. and East Kent.....	£3 0	.....	£4 4	.....	£6 10
Weald of Kent	3 0	.....	4 0	.....	5 15
Sussex	3 0	.....	3 10	.....	5 5
Farnham and country ...	4 10	.....	6 0	.....	7 0
Old.....	1 5	.....	1 10	.....	2 0

CANTERBURY HOP MARKET, (Saturday last).—The trade has closed to-day for the present. A retail demand has prevailed this week. Stock of 1871 very low, and prices firm.

THE FEVERSHAM MEMORIAL.—The memorial of the late Lord Feversham, which has been erected in Hemsley, has been publicly unveiled. It consists of a Gothic canopy containing a statue of the deceased, and terminating in a cross. The structure is enriched with elaborate carving, is approached by a four-stepped base, and has a general resemblance on a small scale to the Scott monument at Edinburgh. It is fifty feet in height, and has been built from silicious sandstone obtained from Bilsdale and Farndale quarries. The statue is of Sicilian marble, and represents the deceased nobleman in his robes as a peer, and as if in the act of delivering an address. It is from the chisel of Mr. Noble. As a piece of sculpture it has been well conceived and wrought out, and conveys an accurate likeness of the late Earl. The Gothic structure protecting the statue has been erected from a design supplied by Mr. G. Gilbert Scott. Situated in the centre of the Market-place, the memorial adds much to the appearance of Hemsley. It has cost about £1,000. The statue is the gift of the family. The cross, the foundation-stone of which was laid in May, 1869, was completed a year ago, but it was only on Thursday that the statue was placed. On the south panel of the pedestal, the following inscription will be carved: To William, second Baron Feversham, this monument is erected by his tenants, friends, and relatives, who cherish his memory with gratitude and affection. Born 1798; died 1867.

LORD POWIS' SLAUGHTER-HOUSE PRIZE.—This offer of £20 for the best instrument that should be an efficient substitute for the pole-ax, has so far resulted in a complete failure. Only two competitors appeared at the trial on Thursday, one of whom declined to use his double-edged dagger; while the other invention, a long tube worked by a spring, was simply ineffective. If such absurd trials be proceeded with, it is questionable whether the Society for the Prevention of Cruelty to Animals will not have to interfere on the other side. The judges were Professor Simonds, V.S., Mr. Iggulden, butcher, and Mr. Arnold, surgical instrument-maker.

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

Just as people had made up their minds to the endurance of a hard and protracted winter, from the early and severe visit of the frost, it began to break, and has finally given way to very mild and damp weather. The season of cold being unaccompanied with much wet, we do not find much damage has ensued to vegetation, whilst the frost has tilled the soil enough to enable those who were backward to complete their wheat sowings before the close of the year, and so become prepared for an early spring, should we be so favoured. In Germany and northern countries there has been a heavy fall of snow, which it is hoped will be a lasting security for the young plants, but this excessive mildness makes it doubtful; while the American canals leading from the lakes, &c., are not likely to be completely open till May, and the million and a-half bushels, now on board, must remain frost-bound till then. But we apprehend that neither at New York nor in London will they be wanted before this period has been reached. The deficiency in France, which has been the principal cause of the present rates, has hitherto been balanced by the over-loaded state of our granaries and continued heavy foreign supplies, and though much loss has been sustained by the fire at Rotherhithe (say 40,000 qrs. wheat), it has had no perceptible influence upon prices, which have very little varied through the month, as seen by reference to the averages, though the markets generally closed heavily, as they usually do near Christmas. The peculiar characteristic of the weather since Michaelmas has been its prevailing fogs, which have been seriously detrimental to the interests of farmers in lowering the condition of samples as soon as thrashed. Throughout the Continent prices for the last month have very little changed. Even in France, to which country all eyes have been turned, the good supplies, want of money, and dulness of business have contributed rather to lower rates, but in the confidence that spring will advance them. Germany has kept dear, and also Russia; while in Hungary, a poor crop, bad roads, and a home demand has enhanced rates beyond an export value. Spain has been partially supplying France with her fine qualities, but has herself been importing low Russian sorts at Barcelona; and in Italy, the crops have been poor and prices high. The winter, however, will be a time to collect stores in Russia, where there has been an extended growth of wheat. So should exports hence to France increase, we shall want a replenishment, and much must yet depend on our future weather as to whether spring will bring higher rates, though there is little prospect of any serious reduction.

The following quotations were lately quoted at the places named: White native wheat at Paris 65s., Chilian 65s. 6d., red Richelle 63s., Northern, 61s.; Danish wheat at Brussels 63s. 6d., at Antwerp 64s.; red native at Louvain, 64s. 6d.; fine white Zealand at Rotterdam, 63s.; Polish at Amsterdam, 65s.; finest red at Hambro', 61s.; wheat at Zurich (Switzerland), 66s.; Danish for spring shipment at Copenhagen, 60s. 6d., cost, freight, and insurance; wheat at Cologne, 62s. free on board; the best new high mixed at Danzig, 65s., cost, freight, and insurance; Königsberg, 63s., cost, freight, and insurance; Berdianski wheat at Genoa, 62s.; fine red at Pesth, 57s.; Spanish white at Arealo, 54s.; Barletta at Naples, 57s. 6d.; soft at Algiers, 63s.; white

at San Francisco, 65s. 6d., cost, freight, and insurance; white at Montreal, 62s., cost, freight, and insurance; red spring at New York 51s. free on board, winter red 52s. free on board.

On 27th November, which reckons as the first Monday of the present four weeks' review, there was a moderate supply of English wheat, and a very heavy arrival of foreign. The morning's show from Kent and Essex was limited. But with a milder state of the weather, which rather influences qualities, sales were difficult at the previous rates. The large arrivals of foreign were against its ready placement, and with granary room scarce, some holders were willing to sell cargoes ex ship on rather easier terms; but not many buyers were found even at some decline. Cargoes afloat were also less in request, and none but the finest could be placed on former terms. The country advises this week, though dull, were not generally lower, though a few markets accepted 1s. less, as Alford, Stockton, and Gloucester. Liverpool was cheaper on Tuesday 1d. to 2d. per cental, and a like reduction took place on Friday. Glasgow gave way 3d. to 6d. per qr., and Edinburgh was down 6d. to 1s. Though Irish wheat at Dublin was no cheaper, rather less money was accepted for foreign.

On the second Monday there was about the usual quantity of home-grown wheat, and a large supply of foreign, though much less than in the previous week. The morning's show from the near counties was small and the condition somewhat improved, but there was no facility in selling, though factors asked nothing beyond the previous rates. In foreign qualities there was a better trade, with an occasional improvement on the lowest bids, ex ship, made on the previous Monday, more especially for red American and Russian sorts. Business in floating cargoes was limited, without quotable change in values. This week was a quiet one in the country as regarded business, with rather more confidence, the samples exhibited being in a better state. This enabled a few places to realize some advance, Sheffield, Melton Mowbray, and a few other towns being 1s. per qr. dearer; but St. Ives was dull, at a decline of 1s. to 2s. Liverpool was firm through the week, but not active. The Scotch markets were very steady, neither Glasgow nor Edinburgh noting any change. Irish wheat at Dublin was firm, but foreign scarcely so dear.

On the third Monday the English supplies kept to an average; but the foreign, though quite equal to the demand, fell off to one-half the previous arrival. But few fresh samples during the morning were exhibited on the Kentish and Essex stands; yet factors still found trade very slow at previous prices, millers being well in stock from foreign sorts. In foreign parcels the town demand was limited, and the country attendance being small, very little was done; but the confidence of holders prevented them offering samples at any decline. Cargoes afloat with difficulty sold at previous rates. As in town so in the country this week: though business was limited prices were much the same, yet the growing belief in a milder winter influenced some places sufficiently to cause a reduction of 1s. per qr., but not many were cheaper. Liverpool was without change on Tuesday, but on Friday there was a dull trade at 1d. per cental

COMPARATIVE AVERAGES.

Years.	WHEAT.		BARLEY.		OATS.	
	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.
1867	56,721½	66 9	82,892½	41 2	8,777½	24 4
1868	80,383½	49 5	65,152½	45 3	4,830½	27 7
1869	49,863½	43 10	81,036½	36 0	3,539½	22 3
1870	84,196½	52 5	78,040½	35 4	5,473½	23 4
1871	67,053½	56 5	84,375	37 1	6,722½	22 10

AVERAGE S

FOR THE PAST SIX WEEKS:	Wheat.		Barley.		Oats.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Nov. 11, 1871	56 5	37 4	23 5	23 5	23 5	23 5
Nov. 13, 1871	55 11	36 9	23 0	23 0	23 0	23 0
Nov. 25, 1871	55 10	36 8	23 8	23 8	23 8	23 8
Dec. 2, 1871	56 7	36 10	23 8	23 8	23 8	23 8
Dec. 9, 1871	56 10	37 1	24 2	24 2	24 2	24 2
Dec. 16, 1871	56 5	37 1	22 10	22 10	22 10	22 10
Aggregate of the above	56 4	36 11	23 5	23 5	23 5	23 5
The same week in 1870	52 5	35 4	23 4	23 4	23 4	23 4

FLUCTUATIONS in the AVERAGE PRICE of WHEAT.

PRICE.	Nov. 11.	Nov. 18.	Nov. 25.	Dec. 2.	Dec. 9.	Dec. 16.
56s. 10d.
56s. 7d.
56s. 5d.
55s. 11d.
55s. 10d.

BRITISH SEEDS.

Mustard, per bushel, brown 16s. to 17s, white 8s. to 9s. 6d.	
Canary, per qr. new 51s. 56s. old 55s. 56s.	
Cloverseed, new red	82s. 105s.
Coriander, per cwt.	22s. 23s.
Tares, winter, new, per bushel.....	5s. 3d. 5s. 6d.
Trefoil, new.....	32s. 40s.
Ryegrass, per qr.	21s. 26s.
Linseed, per qr. sowing 66s. to 68s., crushing 60s. 64s.	
Linseed Cakes, per ton.....	£11 10s. to £12 0s.
Rapeseed, per qr.	82s. 84s.
Rape Cake, per ton	£6 10s. 0d. to £7 7s. 0d.

FOREIGN SEEDS.

Cloverseed, red 58s. to 70s. white 75s. 84s.	
Hempseed, small 41s. to 42s. per qr. Dutch 45s. 46s.	
Trefoil	26s. 32s.
Ryegrass, per qr.	28s. 30s.
Linseed, per qr. Baltic 59s. to 62s. Bombay 64s. 64s. 6d.	
Linseed Cakes, per ton.	£10 15s. to £11 10s.
Rape Cake, per ton	£9 10s. to £7 10s.
Rapeseed, Dutch	76s. 80s.
Coriander, per cwt.	23s. to 24s.
Carraway ,, new	36s. 37s.

POTATO MARKETS.

BOROUGH AND SPITALFIELDS.

Moderate supplies of Potatoes have been on sale. The trade has been quiet, at late rates. The import into London last week consisted of 453 tons 214 bags 359 sacks from Dunkirk, 100 bags Antwerp, 95 tons Havre, 149 tons St. Malo, 72 barrels New York, 115 tons St. Nazaire, and 55 tons Le Vivier.

Flukes	105s. to 135s. per ton.
Regents	70s. to 120s. "
Rocks	85s. to 95s. "
Victorias	110s. to 125s. "
French	65s. to 80s. "

PRICES OF BUTTER, CHEESE, HAMS, &c.

BUTTER, per cwt.:	s.	CHEESE, per cwt.:	s.
Dorset	14 to 150	Cheshire	50 to 72
Friesland	123 130	Dble. Glouc. new 54	70
Jersey	112 118	Cheddar	78 88
Fresh, per doz. ...	15 17	American	50 62
BACON, per cwt:		HAMS: York	112 —
Wiltshire, green. —	70	Cumberland	112 —
Irish, green, l.c.b. 56	62	Irish	102 114

POULTRY, &c., MARKETS.—Turkeys, 10s. to 50s.;

Geese, 4s. to 10s.; Goslings, 5s. to 12s.; Ducks, 2s. to 4s.; Wild Ducks, 2s. to 3s.; Ducklings, 2s. to 4s. 6d.; Surrey Fowls, 3s. to 12s.; Sussex ditto, 2s. 6d. to 5s.; Boston and Essex, 3s. to 5s.; Irish, 1s. 9d. to 3s.; Rabbits, tame, 1s. to 3s.; ditto, wild, 9d. to 1s. 6d.; Pigeons, 6d. to 1s.; Pheasants, 3s. 6d. to 4s. 6d.; Partridges, 1s. 6d. to 2s. 6d.; Hares, 3s. to 4s.; Widgeon, 1s. to 1s. 3d.; Teal, 1s. to 1s. 3d.; Woodcocks, 3s. to 3s. 6d.; Larks, per dozen, 1s. to 2s.; Leverets, 1s. 6d. to 2s. 6d.; Grouse, 2s. to 2s. 6d.

GLASGOW CHEESE MARKET, (Wednesday last).—

A moderate supply of cheese in market to-day. Demand still quiet, and confined to the medium and cheapest sorts, with last week's quotations. Cheddars, first-class 56s. to 64s., late and secondary 42s. to 52s., Dunlops, first-class 51s. to 60s., late and secondary 42s. to 52s. per cwt.

COVENT GARDEN MARKET.

LONDON, FRIDAY, Dec. 22.

The improvement we anticipated has hardly been realised; a few things have been in a little better demand, but the general tone of the market is not like the week before Christmas. We have a good supply of Pines, hothouse Grapes, and Pears. Apples of English growth continue more scarce, but our stocks have been strengthened by the arrival of Newtown Pippins, Baldwin, and others from the United States.

FRUIT.

	s. d.	s. d.	s. d.
Apples, ¾ sieve	2 0 to 5 0	Melons, each	2 0 to 5 0
Cobs, ¾ 100 lb.	6 0 to 6 0	Oranges, ¾ hundred	1 6 to 10 0
Figs, ¾ dozen	0 0 to 0 0	Peaches, ¾ dozen	0 0 to 0 0
Fluberts, ¾ lb.	0 8 to 10 0	Pears, ¾ dozen.....	2 0 to 4 0
Grapes, ¾ lb.	3 0 to 6 0	Pine Apples, per lb.	4 0 to 6 0
Lemons, ¾ hundred.	7 0 to 10 0	Pomegranates, each.	0 4 to 0 8

VEGETABLES.

Artichokes, green, ea.	0 6 to 0 8	Leeks, per bunch	0 2 to 0 4
Asparagus, per hund.	8 0 to 19 0	Lettuces, per score	1 6 to 2 6
Beet, per dozen	1 0 to 2 0	Mushrooms, ¾ pottle	1 0 to 2 6
Brocoli, purpl., ¾ bdl.	0 10 to 1 3	Onions, ¾ bunch	0 4 to 0 9
Brus. Sprouts, ¾ sve.	1 6 to 2 6	Parsley, per bunch	0 2 to 0 4
Cabbages, per dozen	0 10 to 1 3	Radishes, per bunch	0 2 to 0 0
Capsicums, ¾ hund.	1 6 to 2 0	Rhubarb, ¾ bundle	1 6 to 2 0
Carrots, per bunch	0 5 to 0 7	Salsify, ¾ bundle	0 9 to 1 3
Cauliflowers, per doz.	2 0 to 6 0	Scorzoneria, ¾ bundle.	0 9 to 1 3
Celery, ¾ bundle	1 0 to 2 0	Sea Kale, ¾ punnet	2 6 to 3 6
Chilies, ¾ hundred	1 6 to 2 0	Shallots, ¾ lb.	0 8 to 0 0
Cucumbers, each	1 0 to 2 0	Spinach, per bushel	3 0 to 4 0
Fch Beans, new, ¾ 100	3 0 to 4 0	Tomatoes, per sieve	4 0 to 6 0
Herbs, per bunch	0 2 to 0 4	Turnips, ¾ bunch	0 2 to 0 4
Horseradish, ¾ bundle	3 0 to 5 0		

Potatoes: Regents, 105s. to 130s.; Flukes, 120s. to 150s.; French Shaws, 60s. to 70s.

ENGLISH WOOL MARKET.

CURRENT PRICES OF ENGLISH WOOL.	s. d.	s. d.
FLEECES—Southdown hogs.....	per lb.	1 8 to 1 9
Half-bred ditto	"	1 8½ to 1 9
Kent fleeces	"	1 8½ to 1 9½
Southdown ewes and wethers ..	"	1 7 to 1 8
Leicester ditto	"	1 6 to 1 7
SORTS—Clothing, picklock	"	1 7 to 1 8
Primo	"	1 4 to 1 5
Choice	"	1 3 to 1 4
Super	"	1 2 to 1 3
Combing, wether mat	"	1 10 to 1 11½
Picklock	"	1 6 to 1 7½
Common	"	1 3 to 1 4
Hog matching	"	1 11 to 2 0
Picklock matching	"	1 6 to 1 7
Super ditto	"	1 3 to 1 4

HIDE AND SKIN MARKETS.

LONDON, SATURDAY, Dec. 23.

MARKET HIDES	s. d.	s. d.	Horse skins, each	s. d.	s. d.
56 to 64 lbs.	0 4½ to 0 4¾	4¾	Calf skins, light	1 0 to 16 0	
64 to 72 lbs.	0 4¾ to 0 5	5	Full	9 6 to 0 0	
72 to 80 lbs.	0 4¾ to 0 5	5	Polled sheep	13 0 to 15 0	
80 to 84 lbs.	0 5 to 0 5½	5½	Half-breeds	11 0 to 12 0	
84 to 90 lbs.	0 5 to 0 5½	5½	Downs	7 6 to 9 6	
90 to 104 lbs.	0 5 to 0 5½	5½	Shearlings	0 0 to 0 0	
104 to 112 lbs.	0 5½ to 0 5½	5½	Lambs	0 0 to 0 0	

MANURES.

Peruvian Guano, direct from importers' stores, £12 12s. per ton. Bones, crushed £8, half-inch £8 5s., bone dust £9 10s. per ton. Coprolite, Cambridge (in London) whole £3 5s, ground £3 15s., Suffolk whole £2 10s., ground £3 per ton. Nitrate of Ammonia, £22 10s. to £24 per ton. Gypsum, £1 10s. per ton. Sulphate of Lime, £5 5s. to £6 5s. per ton. Blood Manure, £6 10s. to £8 per ton. Dissolved Bones, £7 per ton.

E. PURSER, London Manure Company, 116, Fenchurch Street, E.C.

Guano, Peruvian £12 7 6 to £12 15 0	Bone Ash	0 0 to £0 0 0	
Linsd. Bomby, p. qr. 3 2 0	3 3 0	Phosphate of Lime 0 4 to 0 1 5	
Linsed Cake, per ton—	Niger	2 7 0 to 2 8 0	
Amer., thin, bgs. 10 0	0 0 0	Nit. of Soda, p. ct. 0 10 3 to 0 16 6	
Catsd. Cake, decur. 2 5 15	0 0 0	German Kainit	3 5 0 to 3 10 0
Rapeseed, Guzerat 3 10 0	3 12 0	Tallow, 1st P.Y.C. 2 9 0 to 2 10 0	
Cloverseed, N.A.A. 0 0 0	0 0 0	super, North's 2 5 0 to 2 6 6	

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Prentice's Turnip Manure	"	£6 10 0
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 proving the Wool, both in quantity and quality, and highly
 contributing to the general health of the animal.

Prepared only by Thomas Bigg, Chemist, &c., at his Manu-
 factory as above, and sold as follows, although any other
 quantity may be had, if required:—

1 lb. for 20 sheep, price, jar included.....	£0	2	0
6 lb. 30 ” ” ” ”	0	3	0
8 lb. 40 ” ” ” ”	0	4	0
10 lb. 50 ” ” ” ”	0	5	0
20 lb. 100 ” ” ” (Cask and measure)	0	10	0
30 lb. 150 ” ” ” included)	0	15	0
40 lb. 200 ” ” ” ”	1	0	0
50 lb. 250 ” ” ” ”	1	3	6
60 lb. 300 ” ” ” ”	1	7	6
80 lb. 400 ” ” ” ”	1	17	6
100 lb. 500 ” ” ” ”	2	5	0

Should any Flockmaster prefer boiling the Composition, it
 will be equally effective.

MOST IMPORTANT CERTIFICATE.

From Mr. HERAPATH, the celebrated Analytical Chemist:—
 Bristol Laboratory, Old Park, January 18th, 1861.

Sir,—I have submitted your Sheep Dipping Composition to
 analysis, and find that the ingredients are well blended, and
 the mixture neutral. If it is used according to the directions
 given, I feel satisfied, that while it effectually destroys vermin,
 it will not injure the hair roots (or “yolk”) in the skin, the
 fleece, or the carcase. I think it deserves the numerous
 testimonials published. I am, Sir, yours respectfully,

WILLIAM HERAPATH, Sen., F.C.S., &c., &c.,
 Professor of Chemistry.

To Mr. Thomas Bigg
 Leicester House, Great Dover-street, Borough, London.

He would also especially call attention to his SPECIFIC,
 or LOTION, for the SCAB or SHAB, which will be found
 a certain remedy for eradicating that loathsome and ruinous
 disorder in Sheep, and which may be safely used in all
 climates, and at all seasons of the year, and to all descriptions
 of sheep, even ewes in lamb. Price FIVE SHILLINGS per
 gallon—sufficient on an average for thirty Sheep (according
 to the virulence of the disease); also in wine quart bottles,
 1s. 3d. each.

IMPORTANT TESTIMONIAL.

“Scoulton, near Bingham, Norfolk, April 16th, 1855.
 “Dear Sir,—In answer to yours of the 4th inst., which
 would have been replied to before this had I been at home, I
 have much pleasure in bearing testimony to the efficacy of
 your invaluable ‘Specific for the cure of Scab in Sheep.’ The
 600 sheep were all dressed in August last with 84 gallons of
 the ‘Non-poisonous Specific,’ that was so highly recom-
 mended at the Lincoln Show, and by their own dresser, the
 best attention being paid to the flock by my shepherd after
 dressing according to instructions left; but notwithstanding
 the Scab continued getting worse. Being determined to have
 the Scab cured if possible, I wrote to you for a supply of your
 Specific, which I received the following day; and although
 the weather was most severe in February during the dressing,
 your SPECIFIC proved itself an invaluable remedy, for in
 three weeks the Sheep were quite cured; and I am happy to
 say the young lambs are doing remarkably well at present.
 In conclusion, I believe it to be the safest and best remedy
 now in use.”

“I remain, dear Sir,

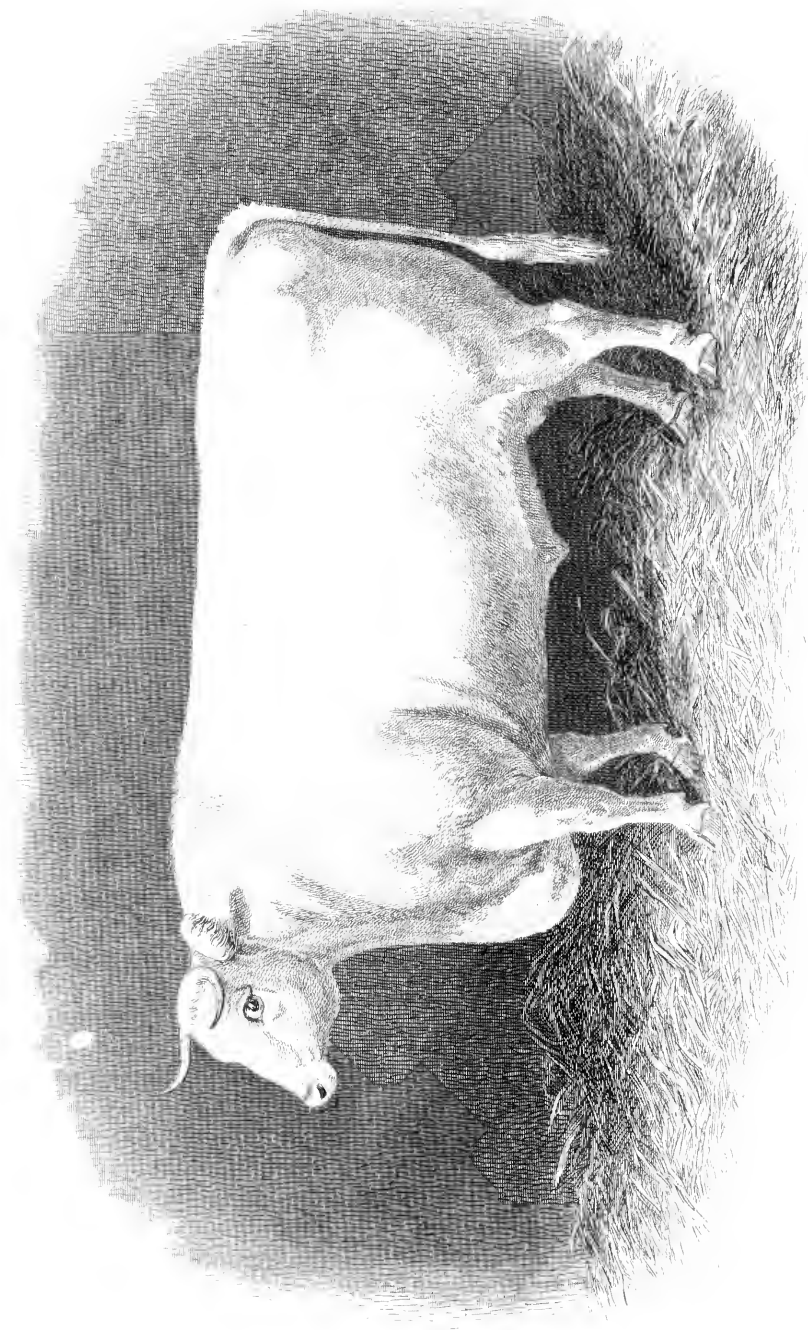
“For JOHN TINGEY, Esq.,
 “R. RENNEY.

“To Mr. Thomas Bigg.”

Flockmasters would be well to beware of such pre-
 parations as “Non-poisonous Compositions:” it is only
 necessary to appeal to their good common sense and judg-
 ment to be thoroughly convinced that no “Non-poisonous”
 article can poison or destroy insect vermin, particularly such
 as the Tick, Lice, and Scab Parasites—creatures so tenacious
 of life. Such advertised preparations must be wholly useless,
 or they are not what they are represented to be.

DIPPING APPARATUS.....£14, £5, £4, & £3.





A. S. Mearns Co.

THE FARMER'S MAGAZINE.

FEBRUARY, 1872.

PLATE I.

A SHORTHORN OX;

THE PROPERTY OF MR. JOSEPH STRATTON, OF ALTON PRIORS, WILTS; AND THE CHAMPION CUP BEAST,
AT THE SMITHFIELD CLUB SHOW, 1871.

This ox, bred by the late Mr. Richard Stratton, and calved on August 20, 1867, is by Bude Light (21342), out of April Rose by Warwick (19120), her dam March Rose, by Young Windsor (17241)—Christmas Rose, by His Highness (14708)—Salthrop Rose 4th, by Lord of the Manor (14836)—Salthrop Rose, by Waterloo (11023)—Young Mossrose, by Lottery (4280)—Mossrose by Phoenix (6290).

Bude Light, a roan bull, bred by the late Mr. Stratton, at Wall's Court, and calved November 8, 1864, was by Lamp of Lothian (16356), out of Diadem by Warwick (19120)—Lotus, by Buckingham (15700)—Cherry Ripe, by Nottingham (15014)—Buttercup, by the Red Duke (8694)—by Hero of the West (8150)—by Lottery (4280)—by Phoenix (6290).

April Rose, a roan cow, also bred by the late Mr. Stratton, at Wall's Court, was calved on April 6, 1862.

It will be seen from this pedigree that the white ox is bred in-and-in, his own dam and his sire's dam being by Warwick, a son of Nottingham, out of Matchless 4th.

Mr. Joseph Stratton writes thus on the early history of his ox: "His dam suckled him and his twin brother, only milking on three teats, without assistance from any other cow. He was weaned early in October, wintered on hay and a little meal. In the spring he went to grass, and in the following October was shut up for about three weeks, to fat for the young class, but my father changed his plans, and turned him into a yard to eat rough hay, straw, and roots, while the following spring he went out to grass again. During the succeeding winter, hay and roots were his only food; and in the summer of 1870 he went to grass with the other cattle, coming in for an hour every day to receive about 3lbs. of linseed cake. In November he was taken in, but never exceeded 7lbs. of corn cake per day, until about a month before he was
OLD SERIES.]

shown, when it was increased with some of Thorley's condiment. He was taken out for exercise about half-a-mile every alternate day, until he went to Birmingham, in November 1871, where he was first exhibited. His twin brother was sold, at two years old, to the butcher; as being slightly inferior and of the same age, we did not think it expedient to keep him on."

Immediately after leaving Birmingham we ourselves thus reported: "The walking advertisement for the Burderop herd has gone on famously since the Spring sale, as it was evident from the first he must do great things during the day. He is a particularly handsome beast, and has continued to feed very level, as in fact for his weight and size it is not often that a better balanced ox has been brought out. He is very good to meet, has a neat blood-like head, and, a great point, is better out than in his stall, so gay is his carriage and so smart his appearance. His touch is wealthy enough for that of a Hereford, or as some superfine connoisseurs might call it, rather strong but in our times this is a fault in the right direction. Moreover, the white steer is 'well-connected,' for his grandam on the sire's side, Diadem, was a gold medal cow at the Smithfield Club, and his half-sister, Village Rose, 'a very sweet lengthy heifer, with every promise of growing, into a handsome cow,' was the first prize calf at the last All-Yorkshire Meeting, where she beat the second prize calf from the Wolverhampton Royal. As is well-known his breeder, Mr. Richard Stratton, died a few months since, and the ox was entered here by one of his sons, Mr. Joseph Stratton, so that he was ineligible for the combined fed-and-bred premium. Otherwise, up to a certain point, he won everything he could easily enough, as, beyond his class, when it came to the best of all the Shorthorns, the judges had the winners in the several classes paraded just for form's sake, and then arrived at an instantaneous deci-

cision. We quite expect to see the white ox do as well in London as he did at Birmingham, if not even better."

At the Birmingham Meeting the white ox accordingly took the first prize of £20 in the all-aged class of Short-horn steers or oxen, the extra prize of £20, as the best of all the Shorthorns, and the Gold Medal, as the best ox or steer of any age or breed; being only beaten for the Innkeepers' Cup, for the best animal in any of the classes, by Mr. Bruce's black Polled heifer. At the Smithfield Club, however, as we had expected, he did "even better," taking the first prize of £30 in his class, the silver cup of

£40, as best steer or ox in any of the classes, and the Champion Plate of £100, as the best beast in the show. The white ox went on from London to Leeds, where he took the second prize of £6 in his class, to a beast placed only third in the week previous at York—on almost any showing as great a mistake as ever was made. Mr. Stratton sold his ox here to Mr. Bruce, of Burnside, Fochabers, by whom he was shown amongst the extra stock at Newcastle-on-Tyne, while he will be kept on for another round of meetings. At Islington he girthed 9 feet 5 inches, and weighed 22 cwt, 1qr, 26 lb.

PLATE II.

RIGHT AND LEFT.

Bang! bang! a bird for each barrel and each pocket—right and left. Well done! you brought down the duck as she sprung with a snap, and the mallard in capital style as he was whizzing away, bidding you adieu in a long hoarse *quack*. We had our eye on you for the last quarter of an hour, watching you stalking them along the

river—now crouching as if you had reached the good old age of four-score-and-ten—now on all fours—and now reconnoitring, covered by an old pollard, taking care to keep it in a line with yourself and the enemy—old Rescue creeping along at your heels, like a prowling cat on the bank of a brook looking out for a water-rat.

OPEN COMPETITION.

In the last number of the *Mark Lane Express* for the old year the printer placed two leading paragraphs in suggestive proximity to each other. The one went on the establishment of classified trials of implements at the meetings of the Royal Agricultural Society, and the other on the prohibition of Royal show stock from entry at local or county exhibitions. It is not so many years since that "out of doors" an almost unanimous opinion was expressed as to the bad policy or actual impracticability of continuing to offer premiums for agricultural machinery. All the great firms were strong abolitionists; the West of England, with some minor Associations, readily gave way to the movement, and the Press with one exception also went over. The exception was the *Mark Lane Express*, which although it so long stood alone, never turned from the line it had taken, as we believe that the proposal for an arrangement of triennial trials emanated with this journal. When we refer here to the elaborate reports now published year after year, on the comparative merits of prize implements, we do so by way of illustrating how fatal a mistake would have been committed had such a test been discontinued. The trial field would have lost almost all its attractions, and, as at the Autumn ploughing matches, everybody would of course have done the best work. A correspondent of *The Gardener's Chronicle* states that at the Smithfield Club cattle show, if the exhibitors of implements but cleared their expenses they would be satisfied; while in many instances it appears that the exhibition is at present a loss: "I know of one having a large space who did not receive a single order." The reason offered for any such stagnation is that an implement catalogue is no longer published, although it seems to be admitted that this catalogue never paid for

getting up, while, it is said further, that at the Smithfield show the exhibition of implements is "quite a secondary matter," and "a subject of indifference." The awkward fact that the gallery catalogue never sold would naturally go to bear this assertion out; as no question the implement exhibition is a secondary matter—because there are no trials and no premiums. If there were no prizes for stock that department would also soon become a secondary matter, the catalogue would not pay, and the Club and the Company would be losers by the business. In every walk of life we may now notice the same incentive to exertion, and the higher the character of the competition the greater the interest excited; just as the millions go to Epsom and Doncaster because they know that at these meetings they will see the best horses of the year amongst the runners.

Down in Staffordshire, however, they propose to reform all this sort of thing. The best of the year are no longer to be regarded as an attraction, but the rather to be avoided as a spoil-sport. Nothing, says Mr. Masfen, tends so much to injure a district show as suffering the Royal Society's animals to be exhibited here. In our simplicity, and as the result, as with Mr. Masfen, of some considerable experience, we should have come to a conclusion precisely the reverse of this. Can anything be more tame or unprofitable than the merely local exhibition which is limited to the district or the parish? where "Brown meets and beats Jones year after year, and neither is a bit the better for the meeting." One of the very evils of the hour is that we have already too many of these limited Companies from which the best of everything is carefully excluded, and where men are taught nothing more than to do as they have done. Whereas, the great aim of such occasions should be improvement, as that when a young exhibitor is beaten by an estab-

lished breeder he may be prompted to ask himself the reason why? Mr. Masfen goes for merit and numbers as the chief constituents of his county show. Mere numbers we regard as little or nothing, while merit we take to be everything. A large badly-filled class is a nuisance to a judge, and of little advantage to any one, even to the prize-takers; but a good animal makes his mark anywhere, and the better he is the greater the impression.

The meeting of the Royal Agricultural Society will be held this year at Cardiff, at the best but a one-sided fixture. It is thus probable that many, even of "the regular customers" may not be present, while according to the example set by the Staffordshire Society they will be denied the opportunity of seeing any of the Cardiff stock at other shows during the season. A great feature in the Yorkshire Society's meeting is that many of the Royal "cracks" here come together again, although frequently with very different results; and even at Stafford Mr. Timmis said "it was a weak piece of business to cut at men who had shown at Royal exhibitions, for there were farmers who could show successfully against winners at the Royal, where there was the worst judging that could possibly be done." In some evidence of this, we may add that a first-prize heifer at Oxford was beaten

during the same year at a midland county meeting, and that a stallion who once took a first prize at a Royal show never took a prize afterwards.

Should this example be followed elsewhere, its effect can scarcely be otherwise than prejudicial alike to the national and local exhibitions. For instance, Mr. Bradburn, of Wednesfield, will most probably have some of his good dairy cows in preparation for either Cardiff or Stafford, and he must make his choice, as must Mr. Walker with his pigs, and many a Shropshire breeder with his sheep. The inevitable result will be that one meeting or the other must suffer, or very probably both. As Cardiff is so far off some people will be content to win about home, or a really good animal will be very much above that kind of business. The Royal and the county Societies should work together, and the one act as a leader to the other; whereas the resolution of the Staffordshire Society makes their interests directly antagonistic. Of course, in the end the weaker will go to the wall; and we cannot but regard this alteration as promising to be attended with far more harm than good. The farmers who do not go much from home are those of all others who require improving, and yet we are to carefully contrive that their vision shall be limited to what is going on next door.

SHROPSHIRE CHAMBER OF AGRICULTURE.

At a meeting at Shrewsbury, Mr. R. J. More opened a discussion on The State and Means of Education for Farmers' Sons in connection with the Educational Endowment existing in the County.

Mr. MORE said, after speaking at length to the existing schools in Shropshire, and the action of the Special Commissioners, that the want felt for agricultural education has been met by means of new proprietary schools. Of these one of the most successful was probably Fraunlingham, in Suffolk, where the landowners subscribed £25,000 for a farmers' school. Other schools have been formed, in some of which the nature of the religious teaching adopted has caused criticism. But on this he would merely remark, the Commissioners treat lightly the religious difficulty, whilst the Nonconformist Conference are going to devote a day to the Endowed School Commission; but he thought there was no cause for alarm, as the Education Department had decided that no bishop or vicar should be *ex officio* on the governing body of any endowed school. Mr. More went on to refer to the Devon school, and the formation of a similar one in Norfolk; but in doing so he merely gave particulars which have long since been published. He concluded by moving "That it is desirable for those interested in the endowed schools of Shropshire to consider by what means the grammar schools of the county may be made available for the education of the middle classes before any scheme of reform is proposed by the Commissioners under the Endowed Schools Act," which was afterwards put and carried.

The Rev. C. F. FROST said, after quoting at great length from the Blue-book of the School Inquiry Commission, I think, in Shropshire a county school, in some measure, would start at a disadvantage, because so much of the educational zeal and liberality has been already bespoke in behalf of the Denstone schools. I shall leave it to others to advocate this view. Much may be said of a county school, and I will, if the meeting will bear with me a few minutes longer, state what seems to me a hopeful prospect of the Denstone school giving us what we want more fully and rapidly (both for the upper and lower middle class) than any other system. First, a word on public school systems. It is, I believe, almost universally admitted by all who have looked into the matter that there is nothing equal to a large school for educating day boys as they should be educated. Its value consists not, perhaps, so much in the book-learning they get, as in the system of the school and moral atmosphere, the public

opinion of the little world of boys, the mania that is taught, the control of temper, the nonsense that is taken out of them, and then the respect and love for the old school, and the thought of whether you bring credit or discredit on it. All this, hitherto, has not been put in the way of the middle classes of England, or rarely. I doubt whether the full benefit of all the advantages of a public school is gained under the number of 200, or upwards. It is said, that when there is some great work in a country which is a pressing want, Providence raises up some one or more men who are possessed with the conviction that that is the one thing to have and wish for. Such a man appears to be Mr. Woodard, the founder of the Sussex schools, which have now got a footing, and he is building through a local committee, at Denstone, for the benefit of the Midland Counties, a school for four hundred, for Shropshire, Staffordshire, and Derbyshire. His idea was to found a great centre in England of middle class education, at a cost of £15,000, one in the north, one in the west, and another in the south, which is already in full operation. I believe the school for one thousand boys, at 15 guineas a year, was about to be opened, or had been opened, at Ardingley. Lord Granville was president. Mr. Woodard has now begun his second course for Shropshire, Staffordshire, and Derbyshire. A magnificent school is rising at Denstone, within easy reach of us, for four hundred boys of the middle-class, at about thirty-five guineas a-year. And this will give to the middle-class all the advantages of Eton and Harrow. The schools at Denstone, and others connected with it, are not built on commercial principles, which generally fail in education, but on the highest and most philanthropic motives, like the motives of those who left our old endowments. And this is the question which has been found to enlist for the lowest remuneration the greatest zeal and the best talent. They only ask from the public liberality, site, and buildings. They are then made self-supporting on very moderate terms; and the system is so framed as to reproduce itself—to throw out offshoots wherever they are needed from the parent stem, supported by it till it is able to take root and grow for itself. It is proposed in the midland counties to vest the authority over them in a provost and twenty-four fellows, twelve of those fellows to be noblemen and gentlemen of the district in equal power with the twelve residents, eight only of the other twelve fellows to be clergy, who take a direct part in the education—the bishop of the diocese, the rector, and ordinary. Now, this plan is already

organised, and ready to our hand, so far as this—that a school for 400 boys, with magnificent buildings, is half-finished, and will be opened in a year or two, and this will probably meet the demand of Shropshire and Derbyshire for some years. Dover school only reached 120 in twelve or thirteen years—some clergy, some professional men's sons; and I think this would greatly interfere with the success of a county school. Again, it is probable that in a short time a school of 1,000 boys of the lower middle class, at eighteen guineas a-year, will be opened within reach, like the school which is already built at Ardingley for 1,000, in connection with these schools. Of the Manchester committee, Mr. Woodard, now a canon of Manchester cathedral, Lord Ripon, and eighty noblemen and gentlemen of high standing are members. I say, let us throw ourselves into this. Let the middle-class subscribe their one or two, or five guineas annually, to St. Chad's College, Denstone, as the cheapest investment they can make for the education of their children. And let the lower middle-class do likewise. In return for this small annual subscription, they will get, when they want it, on the lowest possible terms, the best education for their children in their respective walks of life. They will be brought up with the same advantages of the public school system as the children of the nobility and gentry have so long enjoyed—in noble buildings worthy of those of Oxford and Cambridge and our old educational structures, under clergymen and gentlemen of the highest requirements, working not in a commercial spirit but for love of the work. This is what I have to propose, and it has this great advantage—it is practicable. It is within your easy reach. It has already been done in the south of England. It is now being accomplished in an adjoining county for Salop, Derbyshire, and Staffordshire. It has had the approval and co-operation of the late and the present President of the Privy Council of Education. I do not think a county school would help being dwarfed under the shadow of a great institution like Denstone. But anyhow, something must be done, and that soon, if the middle-class is not to be left behind by the lower, not only in political power but in mental cultivation.

The Rev. W. B. GARNETT-BOTFIELD said: Some twenty years ago, when I first paid strict attention to the matter, I was convinced that there existed schools were being provided all over the country for the children of labourers (and I rejoiced, as you all will, that it was so), yet there was a danger that the labourer might have advantages which were out of the reach of his employer. In re-organising a school in the parish in which my pastoral duty then lay, I took this into deep consideration, and, as far as I could, with the means then in my power, I endeavoured to meet the difficulty. We shall soon have to deal with small endowments, which are not fulfilling their founders' intention. I would merely hint, in anticipation of a suggestion, that such a college as that at Cirencester would be suitable for Shropshire, and I give no opinion on this. I would merely hint that the sons of gentlemen intended for farming would get the best practical education by becoming pupils of some of those intelligent agriculturists who farm their land with the highest skill and with a large capital, and who are, in my humble opinion, the best calculated to afford the right sort of instruction to the young farmers who are to do such wonders in the future. Whilst I have a high opinion of such a college as Cirencester, yet I should like to send a boy to some practical farmer to complete his education. I believe that any boy might begin in a National School, pass on to a higher grade, and after a little practical instruction, either at home with his father, or as a pupil on a large holding, acquire a share of that practical knowledge which will enable him to be an ornament and a blessing to his country as a British farmer.

Colonel CORBETT, M.P., proposed the following resolution: "That a committee be appointed for the purpose of promoting education of farmers' sons in Shropshire, and for entering into communication with the Endowed Schools Commissioners with a view to devising a suitable scheme from existing endowments for that object."

Mr. EVAN DAVIES seconded the resolution, which was carried.

The Rev. S. J. HAWKES said: When Napoleon commenced to improve the condition of his country, he commenced not with the lowest class, but with the middle class.

Sir BALDWIN LEIGHTON concurred in what had fallen from Mr. Pigott—that they had not met to discuss that question one day too soon. He believed that the most proper course would be to form a committee to consider the question. How-

ever valuable the discussion that morning might have been, it was only preliminary, for the question was a very large, difficult, and complicated one.

At the dinner, where Lord Brownlow was in the chair,

Mr. LAYTON LOWNDES, for the magistrates, said that before long county matters would be managed by another body; and he had no doubt the magistrates would endeavour to turn them over to that body in such a way that it would be no discredit to themselves.

Sir PERCY HERBERT, M.P., in regard to the malt-tax, might say that he wished some Liberal Chancellor of the Exchequer would see his way to make some reduction in this, for if that old-fashioned mixture that they imagined to be made of malt were made of nothing but malt and hops there would be much less drunkenness than there was now. The temptation to adulterate it would be very much less if the duty were taken off malt. There had been a great cry of a free breakfast table, but he should like to see something done to give them a free dinner table.

Colonel CORBETT, M.P., said the malt tax was a subject which had had arrayed against it in St. Stephen's knights of the shire and worthy burgesses, who had gone to do it battle to the death; but he was afraid that that impertinent rascal that was continually taking their money from them still stood, was as rapacious as ever, and was in as good health as ever it was. If the Chancellor of the Exchequer would present a budget without this tax in it, he was sure the right hon. gentleman would succeed in bringing down the House, and they might at least say it was a matchless budget. With regard to local taxation, a great deal might be said, and a great deal had to be done, in order to secure justice for all. A measure had been brought forward, but it was taking the luggage out of the front of an over-loaded coach to put it behind. What they said was this—the land was over-burdened with local taxation, and it required to be more limited and defined in respect to household and landed property. That is the point which he took, and that was the point which many members justly took in the House of Commons. There was another subject to which he would allude—the question of the game laws. It was a delicate subject, but it could be dealt with by moderate men on both sides, in the same way as all measures had been dealt with by the practical minds of Englishmen. If they could divest themselves of their prejudices and animosities against anything that remained of the feudal system and that inordinate love of what was called sport, but what he called poultry slaughtering, they could, he believed, settle that question to the satisfaction of all parties concerned. He ventured last session to prepare a bill for the purpose of settling this question, but in consequence of the pressure of business it was not brought before the House. This bill, he thought, would settle the question. It was considered by the Central Chamber of Agriculture, and met with a favourable reception there. He was sure that this question only wanted fairly and honestly considering to have it settled to the satisfaction of every one. It would never be done by acrimony on the one hand or selfishness on the other. If they would follow the harmonious feeling which had characterised them at the meeting that day, and also at that dinner, they would obtain an amicable settlement of this question, which would meet with the approval of those concerned, whether landlord or tenant.

Mr. FIGGINS, M.P., said the owners of the soil are being attacked on all sides. First, there is the Land Tenure Reform Association, and the Land and Labour League, which appear to be pure and unmitigated socialism. I do not think the House of Commons would entertain a scheme for forcibly taking land from its present owners, notwithstanding that during the past three years it has dealt rather freely with property. Then we have the idea of Mr. Jenkins, the candidate for Truro. He would permit the man, who, by hard work and privations, has made a fortune and invested it in land to enjoy it during his life, but afterwards he is to have no control. His words are—"As to the disposal of property, a man when he died had no right to dispose of his property. He held the property in trust for the State and society, and it was for society and the State to dictate to him on what terms he should transmit it." Then we have Mr. Mill, who does not propose to take away the land. If I understand his scheme it is this, that when land is improved in value by the

great and general prosperity of the country, or by a railway passing through or near it, or from any other cause, the owner shall surrender it to the country, and be satisfied with its primitive value. Then the member for Merthyr propagates another idea, "That when a tenant has held land twenty years, he is entitled to share in it, and claim joint ownership." I commend this original idea to the attention of the noble lord in the chair, and the other landed proprietors at this table. But there is one feature in which all are deeply interested, landlord, tenant, and the public, and that is, that the land should render the largest possible amount of produce. It is said by some the system of tenure prevents this, and raises, in consequence, the price of corn and meat; but as there is no duty now upon the produce of other lands in Europe and America, and corn and meat are freely imported, the land-laws can have no effect in maintaining prices. The real cause of high prices is the improved condition of the people, at which we must all rejoice; at present the supply is not equal to the demand, but the extension of railways throughout the world will in time remedy this. Others attribute the difficulty to the uncertain tenure by the farmer, and call for a law which shall remedy this. I hope we shall never see the day when Parliament shall forbid sane and reasonable men entering into a contract. No doubt the 21 years' lease is the right system, and I cannot believe in the difficulty of a lease. A manufacturer who has a twenty-one years' lease, within two of its expiry, seeks a renewal, if he arranges well; if not, he has to pay for dilapidations, and I imagine these could be as well assessed in land as in buildings. But, after all, has not the British farmer the best tenure when he rents from one of the noble or ancient county families, who feel a pride in retaining their tenants? I would say, when you rent under these landlords be content, and do your best; but if you rent under a cotton lord, then have a lease, as the same talent which realised the land would seek for the largest possible profit from the investment. I must refer, as I have done on previous occasions, to the position of the labourer, a subject which is advancing in the public mind, and will ere long come to the front; and I venture to hope the farmers of England will meet the difficulty as far as is in their power, and not let revolutionary demagogues make political capital out of it. Of course, the speaker who at a public meeting proposes and carries by acclamation a resolution that wages should be raised 20 or 25 per cent. is only a visionary theorist. The wages of the agricultural labourer must be governed, as other labour is, by supply and demand. This question of supply is the point to which I desire for a few minutes to draw your attention. I believe the supply of this class of labour will diminish by its absorption into the large towns, under the nine hours' movement, and by emigration. There is a reform farmers can inaugurate; do away with perquisites, give no drink, but pay all the wages in hard cash. This would benefit the labourer and not injure the employer, and in time the labourer might lose his love of drink. Sure I am, before long, this will be made compulsory; for a Truck Bill is to be brought into the House in the ensuing session, and I believe payment in drink will be prohibited, and all wages be compulsory in cash. But, beyond this, I feel that the period is not far distant when the wages of the agriculturist, from various causes, will advance. The want of better lodgment for the labourer is a subject that has been frequently discussed, but I fear no progress can be made in this desirable object until the law of settlement is altered. The philanthropic landlord who would offer inducements to labourers to occupy neat and commodious cottages would only be laying up in store an increased poor-rate, a burden which would reduce the value of his property. This difficulty would be removed by throwing the entire maintenance of the sick, aged, and infirm poor on a general income tax upon all property—only a measure of justice. I have to congratulate the farmers upon the opening of a market by the Corporation of London for the landing and slaughtering of foreign cattle, and trust Government will have established similar markets at all ports where foreign cattle and sheep are received, so that the country may be free from the scourge which some years back so seriously affected it, and this county in particular.

The CHAIRMAN said lately there had been many important questions brought under their notice. Some of those questions had been very ably treated by their county members, and he did not know that he had very much to say upon them but

what had already been said. In the first place there was the question of the cattle disease. He believed that, next to Cheshire, this county had suffered more than any county in England, and he did hope and trust that slaughter-houses for infected foreign cattle would be erected at all the ports, and that they would have a system of quarantine. Local taxation was another important question upon which there had been much discussion, and he hoped, now that they had stated their grievances to the Government, some measure would be brought forward more satisfactory than any they had hitherto had. Another question that had been touched upon was the question of game. He firmly believed that no tenant-farmer would object to a moderate quantity of game. Every farmer would be glad, he was sure, to see his landlord shooting over his farm, and walking about his estate, enjoying himself. And he did believe that the animal that did the most damage to the farmer of all in the world was an animal that was not properly game, and that was the rabbit. That animal burrowed under the soil, and made holes all over it, and he ate the crops as it came out of the ground. It was the most ubiquitous animal in the world—they found it everywhere. He confessed that he did not care himself for a "big day's shooting"; indeed, he often regretted that he could not remember "the good old days" when a man went out with his gun and his dog for a day's sport. He hoped what he had said would not be taken amiss in a hunting county like that, for he hoped, whatever might be done in other respects, nothing would ever be done to spoil the good old sport of fox-hunting. He had a good deal of experience of the good effects of that sport, and he knew how many little difficulties were often talked over by landlord and tenant when they met in the hunting-field. He knew of no particular reason that was to be urged against a good lease; but he believed that there was no county in England that was so celebrated for a good understanding between landlord and tenant as Shropshire is. And he believed that that kindly feeling was very much increased by that Chamber, and to it therefore he most heartily wished success.

Mr. BOWEN JONES said: Perhaps uppermost amongst the barriers to an improved system of agriculture have been over-preservation of game, the system of rack-renting land, which has hitherto so generally prevailed, and the deficient, and, in some cases, shall I say degraded state of education, both amongst many of our class and also the agricultural labourers. I must give expression to the views that I earnestly feel for the necessity of some better system of holding land than that based on a six months' notice to quit. The sound of Tenant-Right is alarming to many minds, and amongst them—judging from what I can catch from the remarks of the honourable member for Shrewsbury, with whose views I generally agree—of his also, simply from non-consideration. I am in a position to appreciate, as much as any man, the value of the sentiments he expresses with regard to the feeling that should exist between landlord and tenant; but I cannot conceive why Tenant-Right should interfere with this good understanding, for it means nothing more and nothing less than security for capital invested for which a tenant has not derived a return, and could be easily settled in the form of an agreement or by arbitration if generally recognised, without the assistance of a measure in Parliament. I can't here enter into the arguments *pro* and *con*, but even in cases where owners have every desire and also possess the capability of meeting the tenant in permanent improvements (and from various causes how often is this not the case?), there is a large outlay required on most land before an adequate return ensues, and this will never be made to the extent it should without suitable and sufficient security is given. The dense population of this island demands food at a rate that we can't now anything like supply; but I believe that the resources of our soil, developed to its full capabilities, would at the present time almost fulfil the requirements; but I fear this will never happen without security being given for capital invested in the soil, the effect of which would be to increase the value of the land, and thereby prove to the advantage of the landowner; improve the position of the tenant, because he would be enabled to secure larger returns from the soil; and elevate the condition of the labourer, because the production of larger crops would require a greater amount of labour, and that of a superior character, that would necessitate good cottages being built upon the farm. And here I would observe, if Tenant-Right is conceded, it will be utterly useless to the bad farmer, and every landowner should

in justice be protected from bad tenants as much as good tenants should have an opportunity of improving their land without risk. As to the labourer, I hear the cry come up from south Shropshire, 9s. a week and a drop of cider; and I turn to my labour account for the last twelve months and find, excluding stock men from the calculation altogether, that most of my ordinary farm labourers earned about 14s. per week, and averaged under 10 hours' work per day. The rate of wages is the same around me, and no doubt my calculation is applicable to my district, and I am at a loss to understand the inequality thus shown between two districts within twenty miles of one another. Practically I know where perquisites are given they are not estimated at much; and I cannot help fearing that a fair allowance has not been made for them in the statements that have lately gone forth to the public. Now, remember, I sincerely desire to see the agricultural labourer's lot improved and his wages increased; and I know no class whose position has altered more of late years; but in return for this the farmer has a right to require a proportionate im-

provement in the character and amount of work done. It is not by a claim for a fixed rate of wages that these matters can be settled; the effect of such a course would be only to increase what already exists to too great an extent—an unequal payment according to capability—and the result would be to drag the best workmen down to a level with the worst. The improvement of the labourer, like that of the farmer, must depend much upon himself; and a fixed rate of wage, were it possible, would no more tend to elevate the working man than a system of Tenant-Right would improve the position of a bad tenant-farmer. I have not time now to more than dogmatically state that the additional demand that each labourer shall have sufficient land to keep a cow is both unfeasible and preposterous.

Mr. G. WISE urged that farmers should have a better security for the outlay of their capital than they had at present, and they might depend upon it that men would never invest their money in land, as they ought to do, until they had better security.

BOROUGHBRIDGE AGRICULTURAL SOCIETY.

AGRICULTURAL LABOUR.

At the first meeting for the year, Mr. Jacob Smith presided at the dinner.

The Rev. C. H. SALE read the following paper: The relations of labour and capital are now universally in an excited, not to say disturbed, state. There are various concurrent causes of this disturbed condition, material and moral, economical, social, and political; many of them natural and necessary, being incidental to a progressive civilization; others morbid and fraught with danger, the growth of antiquated, if not unjust, laws, the fruits of selfishness, and of ignorance of right principles; but all taken advantage of by men whose trade is agitation, and their object too often revolution. And it is to be much feared that the strikes and lock-outs in which the difficulties arising from this state of things have found a rough and irrational solution, only add evils of their own, which tend to separate more widely classes, where interests rightly viewed are identical. But it is not at present intended to investigate the very difficult question of the general relations of employers and employed, and they are mentioned only because it is necessary to bear them in mind, in so far as they even now indirectly affect agricultural labour, and may shortly do so directly. To the farmer there cannot be a more vital question than that of labour. The item of labour, under its various heads, if not equal to that of rent, is by far the heaviest in his balance-sheet, sometimes exceeding that of the bare rent. It is also, while the most optional expenditure, the most remunerative; and modern farming imposes a growing necessity for more and more skilled labourers. The questions, then, of rates and local taxation, to which farmers devote so much as yet unrewarded energy, vanish into comparative insignificance in presence of the undoubted fact that *agricultural labour is everywhere declining both in quantity and quality*. Notwithstanding the general rise of wages, in which the agricultural labourer shares, the supply is far from equal to the demand—able-bodied men are very scarce, and skillful labourers rarer still. I need not seek to prove what every farmer's experience attests. What is to be done? Can anything be done? These questions may have a better chance of satisfactory answer, if we pass in quick mind some of the causes which have conducted to bring about the present state of things. And first we must notice the gradual, but now almost complete, change in those pleasant relations between landlord and tenant, master and man, which used to attach a man to his employer and to his native place or neighbourhood. Those relations have, from whatever causes become mainly, in many cases entirely commercial. It is a question of money, a man passes from master to master, from one neighbourhood to another, with little consideration of anything beyond wages. The righteous measures which have virtually abolished the law of settlement, the facility and cheapness and familiar habits of locomotion, the spread of education, and the enlargement of men's minds and experience, the diffusion of information as to work and

prices, the very energy and enterprise of our best young men, whose migratory habits have been already formed by annual change of master and village at the hirings—all these contribute influences which carry men, and the youngest and the best, from home. Wherever there are, or are thought to be, high wages and openings for enterprise, thither there is a rush of the young, the strong, the self-reliant. No age has seen such a displacement of population, such concentration of labour in our cities and manufacturing counties, above all, such an enormous emigration. It is quite true that good men may do well at home, but it is common for men who are doing well to wish to do better; and in many rural neighbourhoods which have points of contact with manufacturing districts, or communications with settlers in foreign parts, the able-bodied men are drifting away year by year, and the youths betake themselves in increasing numbers to the higher paid labour of towns and coal or iron fields, or the adventure and certain prosperity of a settler's life. And while the dearth thus created is no longer relieved by an annual immigration of cheap Irish labour, it is to be expected that it may be somewhat intensified by the action of the new education law, which is likely to withdraw from employment many young boys, and perhaps some women, mothers of young families. What then can be done? It must be remembered that many of the causes of this state of things, so far from being evil are in themselves good—others are the inevitable incidents of a growing civilization which is reaching at last, we may thank God for it, the rural population. We cannot arrest these forces if we would, and we ought not if we could. We must simply accept the situation, and make the best of it. It is of no use to complain of the spirit and circumstances of the age, and engage in a vain struggle to oppose them. We must work along with them and see if we cannot so deal with them as to turn them to our purpose. And first of all we must avail ourselves of every possible help to be obtained from improved implements and machinery of every kind—of every possible economy of labour. We must substitute, wherever we can, horses for men and engines for horses. Science has done much for farmers, and it must be acknowledged that they have not been slow to avail themselves of its aid; and if only an economical and easily applied system of steam cultivation could be invented (and why should it not?) many of the difficulties of the labour question would be solved at once. And even as things are now, why should not farmers combine to establish steam ploughs in every neighbourhood to be used in turn by mutual arrangement? And why should not neighbours join their forces on thrashing days and other like occasion? Surely we may hope that the time is at hand when machinery may do as much in cultivation and preparation for harvest, as in reaping and thrashing. If this could be achieved the labours of the farm would be less dull, less uninviting to men of a more cultivated and versatile intelligence, who are now attached to other em-

ployments. But we shall be unable to keep the able-bodied men at home unless the farmer can offer wages in some measure equivalent to the high rates which attract them to the manufacturing districts. I think this not so impossible as it seems to be. The labourer, or his wife, is growing sufficiently intelligent to understand that a high scale of charges for everything, excepting sometimes coal, accompanies a high nominal rate of wages, and that seasons of depression and absolute want of work are not uncommon in manufacturing counties. But why should not the gains of the agricultural labourer be largely augmented without loss to the farmer, but rather to his gain, by a change in the principle of payment? Weekly wages, at very much the same rate to all, is now the basis of payment. It is a bad rule—it reduces all skilful and unskilful, idle or energetic, steady or immoral, to the same level. Might not the farmer adopt the principle of paying, as far as possible, according to the quantity and quality of work done? Might not piece-work, or work by take, or bargain, be the rule? This change seems to be feasible, if steam cultivation can be introduced, and would tend greatly to add to the earnings of the labourer and to his satisfaction in his work. But all would be in vain so long as the dwellings and home life of the labourer are so miserable as they are too commonly suffered to be. There are too many villages in which the condition of a considerable number of cottages is simply scandalous! The horses and dogs are more comfortably housed! The tenements are mere hovels, dangerous to health, and the arrangements forbid comfort, and even decency; and the rents, nevertheless, are often high. How can a respectable labourer be expected to remain in such quarters if he has any chance of getting out of them? And, moreover, such as they are, there is often an insufficient supply. We may be thankful that in these days he aged or infirm are taken care of, they do not die off quickly and leave vacant cottages. There is very often not a house to be found in which a man with any self-respect can take up his abode. Tenant-farmers should make this a matter of compact with the landlord or his agent. It is to be assumed when a man takes a farm that he has appliances for cultivating it, and labourers' cottages sufficient in number and respectability as are necessary as farm buildings. A comfortable cottage at a reasonable rent, with decent offices, including pigsty, and with a garden, need never want a worthy tenant. And lastly. Surely something might be done by the farmers themselves to render the lot of an agricultural labourer more cheerful, and to establish more friendly relations between employers and employed. At present the isolation is complete. There really exists, I am satisfied, much kindly feeling; what is wanted is to give it expression, to the benefit of both classes. And the overtures must come from the masters. At present all endeavours to elevate the condition of the labourer are mostly left to the squire or clergyman, chiefly the latter; and are sometimes viewed with suspicion. The farmer perhaps subscribes to the clothing club or school, that is all. But why should he not show a more *personal* interest in what concerns the welfare of the labourer? Why should he not be a member of the benefit society, which is so dear to the working man, and which ought to be dear to the ratepayer? Why should he not give his company to his thrifty poorer neighbours at their annual club feast? Why should there not be in every village, under the auspices of the principal inhabitants, a reading room, a lending library, even a working man's club; and some provision for the amusement of the young, such as a cricket-ground, or a singing-class, with an occasional concert or reading? I am satisfied that such attempts to establish a kindlier feeling between different classes and healthy local interests would not prove altogether fruitless. There might be some misconception at first, possibly some ingratitude, and a few failures; but are not these the inevitable conditions of ultimate success? At any rate, the present state of the supply of agricultural labour is most unsatisfactory. The prospects of its future are more alarming, and I may be excused for calling your attention to it.

Mr. G. W. APTLEYARD did not agree that labourers should have pig styes. The question of labour was now becoming one of a very serious character, seeing that the nine hours' system was now becoming generally adopted. The other day he was talking to a celebrated landlord, who seemed to think, as regarded farming operations, that it was time to consider how they could apply steam and machinery to substitute to some extent manual labour. He was of opinion that it would

be well if they could bring into general use the steam plough, and also have steam power brought to bear in other respects on a farm. It was worth considering whether prizes might not be given for the best constructed farmsteads, providing machinery for preparing food for cattle, and also distributing food for them around the farmstead. Mr. SALE had offered some very good remarks in introducing the question of agricultural labour, and he was convinced it was necessary that machinery should economise labour to a far greater extent than was the case at present.

Mr. R. M. CALDER said that, although wages were higher than formerly, yet there was not the number of good labourers that was necessary. He considered that the cottage accommodation, generally speaking, for agricultural labourers was really very bad. Now-a-days especially was it necessary that agricultural labourers should have decent dwellings with some regard to sanitary appliances, and inducements to cultivate decency and respectability, things which were far more attended to now than they were a few years ago. A good pig hung up in the house was a great assistance to a poor family, and another at the same time in the sty to be suspended from the roof in due course. He pointed out as one reason why farm labourers went to towns to work was that agricultural work was monotonous. Men plodded on from day to day all the year round, and had nothing to look to in their old age, it being ten to one that they went to the workhouse. He suggested that some sort of club or society should be established for agricultural labourers, by which they might derive benefit by paying in small sums, something like the life insurance system, so that they might secure to themselves a small annuity in their old age, a good thing to look forward to. The labour question was a most serious and difficult one, and did not seem likely soon to be solved. He urged that farmers, in the position they were now placed, should use machinery a great deal more, and endeavour to do with less manual labour.

Mr. BENNETT considered that agriculturists had worse servants and worse labourers than they had thirty years ago.

The Rev. C. H. SALE suggested the desirability of farm work, as far as possible, being done by take or bargain instead of by weekly wage.

Mr. R. M. CALDER said that drainage was done by piece-work, but the daily routine of a farm could not be so paid for. He was very much in favour of piecework, and should like everything done by contract, as the work was then cheaper and better done.

Mr. APLEYARD thought the hour work system might be adopted with advantage.

Mr. BENNETT was of opinion that much more piecework might be done than was the case at present.

Mr. T. SCOTT said that contract work was done in a superior manner generally speaking, but it was not applicable to all kinds of farm work. They were now as a rule paying their farming men quite as well as the working men in the manufacturing districts, taking everything into consideration. Farm labourers, their wives and families, were much better clothed and fed, and had more advantages than they used to have, and were fully equal to the labouring class in the manufacturing districts. Many labourers were getting no less than 18s. per week, in addition to which there was what his wife and children were able to earn, with cheap cottages, gardens, and the like. There had of late years a very great improvement taken place in the habits and social position of the agricultural labourer, who had now, instead of old dwellings to live in, new houses upon a much more commodious scale. He was an advocate for contract work on a farm as far as it could be carried out, but there was a large amount of labour on all farms which could not be let, and must be done by day. He urged the importance of cultivating between agriculturists and their servants the best possible relations and good understanding, and binding the two together in sympathy and mutual feeling. Educating and improving the minds of servants was to the advantage of both employer and employed, for they might depend upon it as a rule that the better a man was educated the better servant he would be, and he would then be able easily to manage a steam engine, and to do his general work in a more systematic and intelligent manner. He did not agree with Mr. Calder as to the monotony of farm work. If a man were kept thrashing from the 1st of January to the end of December it would no doubt be monotonous, but this was not the case, as there was variety about farm work, more

so than was associated with the labour of men in factories. He did not think with Mr. Calder that agricultural labourers were likely to go to the workhouse in their old age, as their position was now so different to what it used to be. He alluded to the fact that many agricultural labourers, after going to the manufacturing districts for work, came back again to the rural districts in a state of poverty, and were glad to resume their old employment. In the iron and lead mining districts the wages of labourers might be more than those of rural labourers, but then their outgoings were a great deal more.

Mr. FOWLER was in favour of contract work, which was better and cheaper than work done by day. Proper and suitable cottages for workpeople in country districts could be put up at from £90 to £100 each, and pay reasonable interest for the money laid out.

The Rev. R. D. OWEN thought that £90 or £100 was rather a high estimate, as the interest upon building was not less than six per cent., and therefore the rent of a labourer's cottage must be at least £6 per annum. He thought that comfortable cottages could be erected for less than £100 each, and pay a fair amount of interest for the capital invested. He was against women working in the fields, considering that they ought to be keepers at home, whereby they would be able to have their houses clean and comfortable for their husbands on coming home from work, tired and jaded. The farm labourer

was then more likely to remain at home in preference to going to the public-house. He approved of provident societies as a help to labouring men, good cottages for them to dwell in, with small gardens attached, and accommodation to keep a pig.

The CHAIRMAN was in favour of steam cultivation, and he believed it was adopted for that neighbourhood, and they might take shares in the North and East Ridings Steam Cultivation Company. The question of steam cultivation was one that must be practically discussed and taken really in hand at no distant time. He considered that the condition of the farm labourer at 18s. per week was better than that of the town labourer, as he breathed a purer air and had not so much to pay in doctor's bills. For the sake of a shilling or two per week more wages men were led away to towns, but he believed they would find in the end that it would have been better for them if they had remained in the rural districts. He was in favour of agricultural labourers having pigs.

Mr. CALDER said that 15s. per week for a man at Myton was better than 22s. per week at Middlesboro'. Men came back again from that town to Myton. An institute, reading room, and library had been established, and young men spent their evenings in the reading room in preference to going to the public-house. Since he went to Myton the labourers on the estate had much improved in intelligence and educational knowledge.

S T O W M A R K E T F A R M E R S ' C L U B .

EWE FLOCKS ON HEAVY LAND.

At the last meeting the subject for discussion was Management of an Ewe Flock upon Heavy Land, introduced by Mr. Edward Lingwood, of Brockford. The chair was taken by J. H. Heigham.

Mr. LINGWOOD read the following paper: Within forty years an idea prevailed that sheep could not be wintered upon heavy land because the rot would destroy them. Thorough drainage, and the extended cultivation and great variety of green crops, together with the conviction that the farmer must have something to fall back upon besides his corn, have quite altered the aspect of affairs; it must be borne in mind that no amount of care and management will entirely compensate for the loss of a naturally dry soil—the true home of an animal. Those of us, therefore, who cultivate stiff land must make the best use we can of our positions. The first thing to be considered in setting a flock is, it need hardly be said, the choice of breed; but this part of the subject I don't propose to enter into now. Mr. Sexton will probably tell you there is nothing like the Cotswolds; Mr. Boby goes for Southdowns, and Mr. Green for "Suffolks," though I don't suppose the last-named gentleman would go so far as to say his was the identical breed that Noah took into the ark. However, the selection being made the food supply will next demand our attention. We occasionally see ewes sold early in the spring because their owner had no more roots for them, at the same money they were worth the previous Michaelmas. To obviate this I begin to prepare in April for the following season by sowing a large bed with drumhead cabbage seed, the plants from which are put out on heavily-manured ridges some time in June, about 2,000 to the acre, reckoning a quarter of an acre to every score ewes. As soon as the wheat is ready for hoeing I select a piece on which I sow broadcast two bushels an acre of Italian ryegrass and horsehoel it in, calculating to have something like two acres for the before-mentioned number of sheep. Early in June a few swedes are sown, as I have a particular objection to giving sucklers ryegrass in cold weather. In July turnips are drilled after the ryegrass, one-third to one-half of which are drawn off in November, part of these are set close together with their tops on and the remainder are topped, laid in rows, and covered thickly with straw; some clove seed is also sown after the tares that have been mown for the horses. Soon after clipping, the lambs having gone, I discard the broken mouths, bad mothers, and any individuals that have got badly through lambing, as my experience is that but few of the latter will breed again, replacing them with some good-sized shearlings that have not previously had lambs.

I say good-sized on account of less risk, and hogget mothers rarely wear well. The rams should be well bred, not too wide across the forehead, and if of any of the white-faced breeds not over two years old. At this season (June) the leys will afford the requisite food, with perhaps a change to a piece of mustard, and an occasional run on a pasture; but I strongly disapprove of eating uplands bare at any time between February and November. By the middle of July some of the leys from which clover hay has been taken will be ready for use, and after that the stubbles till about the 21st of September, when high feeding, if you wish for a good fall of twins, must be resorted to. To this end the flock is changed daily, getting old and young leys, pasture, and stubbles, with a nightly fold on coleworts, some watchfulness being required that no losses occur from over-eating when first going to the latter victuals. At Michaelmas marking takes place, and there is nothing so durable for the purpose as a mixture of red lead and linseed oil. A large letter looks bad, and a smeared one worse. To cure the latter difficulty I invariably shut my sheep up beforehand till they are sufficiently hungry to prevent all tendency to rub before the paint is too dry to be removed. The rams are turned in by October 1st and are supplied with some linseed-cake and old beans every morning, which they soon learn to draw away to; afterwards the mangolds and swede tops and small roots are cleared up, the unbroken stubbles affording a little amusement, till by the third week of November a few turnips will be required. These are thrown out on the pastures daily, the animals going to fold (weather permitting), on some of the unploughed turnip or mangold land, receiving when there chaff in the proportions of one-third hay, and two-thirds barley or pea-straw in covered troughs. On no account allow frozen roots or green food the first thing in the morning, or a certain loss of lambs will be the result. Should the frost be severe and a run on some rough grass can be had, the fewer roots that are given at this time the better; and in addition to the chaff some barley, bean, cloverseed, or pea-straw put in racks or between hurdles, afford occupation if but little nutriment, always taking care that fair condition is maintained. I should prefer, however, risking a lot that were too thin to one that had got to the other extreme. Soon after the commencement of the new year I begin to eat off the turnips that were left on the land, a liberal supply of succulent food being now indispensable. Should the land be too wet, a remove must be made to the pastures; indeed, a change is desirable in either case, both on the score of exercise and as a cleanser of the wet and clogged feet, for in

the matter of foot-rot prevention is far better than cure. A few days before lambing a dry pasture near home becomes the feeding ground, on which is thrown out any turnips that may remain, with swedes and cabbages: the sleeping place a temporary yard with pens round it for the newly-lambed ewes. I need hardly say that constant watchfulness will now be necessary, but if the flock has been properly managed, has not been frightened with dogs, or allowed to break out, no very great difficulty will usually be experienced. Depend on it when you hear of great losses of sheep and lambs, there is good reason for it; not but what difficult cases may, and will occur, which cannot be practically treated on upon paper. You may read precisely how a man's leg should be taken off, and would then be just as capable of performing the operation as you were before. Wrapping up in a sheep skin is the best cure for a chilled or weakly lamb, giving it warm (not hot) milk in small quantities. This is preferable to taking it to a fire, as in that case oftener than not its mother will decline to have anything more to say to it. Sheep will eat ivy plucked fresh from a tree when they will touch nothing else. Should they refuse all food, or take it in insufficient quantities, no time should be lost in giving gruel. Many an animal dies every season that a week's hand-feeding would have saved. When turning out don't put too many young lambs together, otherwise they get knocked into ditches and drowned, or perhaps internally injured; and if you have any bad milkers it is better to feed them high (linsed cake and malt chives are as good as anything) rather than give the lambs cow's milk, which does not always agree with them. Shutting up is unnatural to animals so well provided against the vicissitudes of climate, and if persisted in is sure to result in loss of wool. A piece of old grass is mostly reserved, and here let me turn aside from my text for a moment to remark upon the utter senselessness of breaking old grass even if second rate. Drain, clean, and apply two or three dressings of farmyard manure, then see if in the average of years you are not better off with a proportion of meadow. It is not very long since I sold sound wheat at 35s. a quarter, and I should as soon expect to find a hare on the top of the monument as twitch grass in an old pasture on which the ewes are drafted, as their progeny become strong enough to take care of themselves. Here they have chaff (if the weather is cold enough to induce them to eat it), swedes, and cabbages, lying at night if the ground is dry, but not otherwise, on the land from which the cabbages have been removed. I have tried feeding them where they grew, but it resulted in so much waste that I gave up the practice. As soon as a sufficient bite of Italian ryegrass has sprung up another remove is made, roots being given as well, as long as they last, the lambs going forward through the hurdles, and eating a mixture of miller's offal and linsed cake. This looks an expensive proceeding; but it must be borne in mind less of other food will be required, and your animals will reach 25s. each much sooner than they would otherwise; besides, I prefer selling mine early. The ryegrass finished, the leys will be fit for use, which will about bring us to the point we started from. Should the breeder, however, wish to keep his lambs on after weaning, let him take especial care to put them on fresh ground; any place that has been grazed with sheep the same season will inevitably ruin them, as I once found to my cost. I have given no opinion as to the number suitable for a given extent of land, because circumstances must govern cases. A flockmaster may be his own landlord, may possess a lease, be under a yearly tenancy, or may be prejudiced in favour of some particular kind of stock. There are no doubt exceptional instances to the contrary; but in a general way, it is my humble opinion, to overstock with any one description of animal will not be found advantageous in the long run. You will now probably be looking out for the balance-sheet—the easiest thing in the world to get up—on paper. Many of you will hardly have forgotten an imposing array of figures, purporting to be a farm balance-sheet that went the round of the papers some few years since, yet its compiler refused a handsome offer to allow three practical men to test his statements. I once handed a bill back to a tradesman with the remark that, in copying it from his books, he must have turned the sixes the wrong way upwards. I shall therefore merely say, in conclusion, that losses should not exceed five per cent. per annum, and the wool and refuse ewes when fit for the butcher ought to replace the gaps. Moreover, I should not consider less than twenty-seven or twenty-

eight lambs (alive on the 1st of June) to the score a good fall. In giving you these few facts, I have endeavoured to be as concise as possible, bearing in mind the advice given by the president of one of our county clubs to an intending reader that the time taken up with an unreasonably long paper would be better devoted to a discussion of the matter under consideration. I will therefore now leave the subject in your hands.

Mr. J. J. HATTEN asked whether it was good policy to have ewes at all on a heavy land. And also what proportion Mr. Lingwood would recommend to the 100 acres.

Mr. KISTRUCK, on being called upon by the Chairman to speak on the subject under discussion, said he left the management of his flock chiefly to his man, and he would advise flockmasters to get a good man and pay him well. Some people were disposed to condemn the practice of using mangold. His shepherd was of the same opinion, and always condemned them. Last year, however, he (Mr. Kistruck) had no turnips, and he was obliged to fall back on beet, and he must say that he never had such a fall of lambs in his life. He had nearly a lamb and three-quarters to every sheep, and this fact rather induced his shepherd to think more favourably of the use of beet.

Mr. JAMES MATTHEW said he should like to know why Mr. Lingwood preferred a shearing that had not had a lamb. For his (Mr. Matthew's) own part, he preferred a shearing that had had a lamb, inasmuch as you had then the opportunity of seeing what the animal really was, whether or not it was a good-framed sheep, whereas a shearing that had not had a lamb was filled up with flesh, and there were probably many defects hidden. And besides it was generally expected that a sheep would have a better time with the second lamb. There was one point in regard to which he must differ with Mr. Lingwood, and that was as to there not being twitch in old pasture. If Mr. Lingwood would go into Harleston, and many other places in this neighbourhood, he would find lots of twitch in old pastures—in fact, there were very few without it.

Mr. NOBLE said the gentleman who asked whether it was right to keep a ewe flock on heavy land at all struck the right note. That was after all the important question, and one that he hoped would receive an answer. With reference to another point that had been raised, he must say that his experience led him to prefer a maiden shearing. The question was whether the sheep could be got up for the tup at all. There might be a little more risk with the maiden shearing; but once the shearing had lambled down, he thought the sheep would stand much longer.

Mr. W. WILSON, in responding to the call of the Chairman, observed that he once lambled down eight score ewes, and he did not lose a single ewe, and when there were no turnips, they had nothing but beetroot and straw. He did not agree with what Mr. Matthew had said about the shearing hogget. He (Mr. Wilson) thought it was the worst thing anybody could do to buy a hogget that had had a lamb. The maiden shearing was decidedly preferable, for it was stronger and better, and likely to pay more in the long run of years.

Mr. J. TURNER asked whether the sheep were fed in the yard.

Mr. WILSON said they were, adding in reply to another question that he threw the beet down in the yard. He never had such luck before. They had no corn; but they had all the straw they liked.

Mr. J. MATTHEW said some persons could evidently keep sheep cheaper than he could. He could do nothing with sheep fed on mangold. He remembered that one spring he was badly off for turnips, and he threw beet on to the pastures where the sheep had lambs, and after they had had beet about a fortnight, the lambs began to die. He discontinued the beet, and turned the sheep on to small rye, and he did not lose any more lambs after that. He could not of course attribute his loss to anything but the use of the beet.

Mr. J. TURNER: That was after your ewes had lambled?

Mr. MATTHEW: Yes.

Mr. WILSON: Was the beet grown by artificial manure?

Mr. MATTHEW: No, with farmyard manure.

Mr. WILSON said he was once very unfortunate in feeding sheep on beet grown by artificial manure.

Mr. JOHN TURNER said he quite agreed with what Mr. Lingwood had said relative to making ample provision for

lamb in the spring. He (Mr. Turner) rather thought more reference would have been made to the yarding of sheep. His plan was to keep his sheep in the yard. He began to put them into the yard about Christmas time, and he kept them there constantly, occasionally walking them out. He littered the yard night and morning, and raked them up with bean-straw, pea-straw, or with whatever he happened to have at the time. He generally put about a third of wheat-straw to a third of hay, and allowed the sheep to run on a meadow an hour or two in the day, and he never found anything wrong with his sheep so treated. His man was particular in looking after them, and if he found any that limped at all they were tended to at once. He quite agreed with the use of beet for sheep. If a beginning was made with beet care must be taken to keep on with it. If the sheep were not fed with beet before they lambed they must not have any directly after. About six weeks before the sheep lambed down it was his custom to give them a certain quantity of beet, and he increased the quantity as they grew nearer to lambing time, and when they had lambed down he gave them beet on the pastures. With regard to the propriety of keeping breeding sheep on heavy land, he might say that he concurred in it if they were treated in the manner in which he had been accustomed to treat them. He generally pulled a certain quantity of turnips off, and he placed the tops and tailings on one side, and gave the sheep a few occasionally. He left a piece of turnips to turn the ewes on shortly before they lambed, but he took care to get them into the yard again before they lambed. He occasionally gave them cut chaff, malt coombs, and if he found anything going wrong he gave them something else. He thought new milk was preferable to gruel—in fact, he never boiled any gruel for his sheep. He perhaps sometimes gave them some of the old-fashioned medicine, a little old beer sop, which they sucked down, and it was no doubt useful when they were unwell. He also found that they did well on a little oileake mixed up. Mr. Turner added, in answer to Mr. Matthew, that he had no objection to a shearing if she had had a lamb—in fact, he rather preferred a shearing that had had a lamb to one that had not.

Mr. WOODWARD: If you tip a shearing that has had a lamb the lamb must have been off early.

Mr. HEWITT inquired which was the best breed of ewe for heavy land.

Mr. J. TURNER said he generally kept the blackfaced ewes topped with the Leicester top.

Mr. FARROW: When do you top them?

Mr. TURNER said about a fortnight after Michaelmas, adding that formerly he could not get his feed early enough on the heavy land, but now he had a good quantity of feed when he wanted it, and instead of eight or nine score, he kept twelve score sheep.

Mr. ADAMS (shepherd to Mr. L. Webb) remarked that his practice was to put the sheep into the yard. He gave them mangold mixed with chaff, allowing the mixture first to lay a few hours. He also gave them bran, and he found that his sheep kept their plight very well. Some of them had, however, turned up lame.

Mr. TURNER: Do you attribute the lameness to the fact that the sheep were in the yard?

Mr. ADAMS: When in the yard they flung out a fever which, I think, went into their feet.

Mr. TURNER: What breed of sheep had you?

Mr. ADAMS said Hampshire Downs. There were a few half-bred in the yard, and none of them turned up lame. He must say that he never saw lambs do so well as when the sheep were fed with mangold thrown out on to the pasture.

Mr. HATTEN observed that it was the peculiarity of the Hampshire Downs to turn up in the way referred to. They were not to be depended upon, and he for one should not condemn the practice of keeping sheep in the yard because a quantity of what might be called fancy ewes had fallen down with the disease. He would guard flockmasters against the use of beetroot alone. He once had some ewes which had beetroot, and beetroot to it (laughter), and the lambs were fine and healthy, but soon after taking the mother's milk they fell away and died. He had known this to be repeatedly the case, but when ewes had grass with the beet they did well.

Mr. ADAMS, in reply to a question, said he preferred giving the beet in troughs. The roots went further, and besides, if

the mangold were thrown about the meadows the sheep were likely to knock themselves about after them.

Mr. TURNER, in answer to Mr. Thomas Lingwood, said if the ewe was poor, and she had got lambs, he sometimes gave a little cake.

Mr. THOMAS WOODWARD expressed his opinion that it was desirable to keep ewes on heavy land, especially at the present prices of lambs and mutton, but he was not inclined to think that it was desirable for a man to keep all ewes on heavy land. It was much better to keep a certain quantity of ewes and grazing sheep as well. He had tupped a few hoggets, and sold them out as couples, and been pretty successful. He had now taken to shearlings and two-shear. His system was to provide liberally for the ewes, similar to the plan adopted by Mr. Lingwood. He (Mr. Woodward) questioned whether they ought not to keep a flock of ewes more economically than was frequently done by growing roots on heavy land. The great point to arrive at was how to keep the ewes at a cheap rate. He thought that after the ewes had been tupped, and the tup taken away, they might be kept eight or ten weeks at little cost, and he considered the system of keeping them in the yard with dry food the right one, but previously, and after they had lambed, he liked to be liberal with his keep. He had the lambs which he bred, and his practice was to have half the white turnips pulled up and heaped, and he went to the expense of cutting for his hoggets about half what they required; they would pick up the rest, and the ewes followed after. His ewes had no corn or cake, but they had all the straw they could eat, and when the straw was good they required but little hay. Ewes were great consumers, and unless care was taken they would soon run away with the feed. He had four hundred acres of land, and he kept about twenty score sheep. He had about seventy-five acres of pasture. If a man wanted to get his lambs up quickly he must feed them liberally. He had had them so that they paid 25s. each in May.

Mr. FARROW said he understood Mr. Wilson to say that beetroot grown with artificial manure was not good for sheep.

Mr. WILSON: For breeding ewes.

Mr. FARROW said he remembered that at the first discussion in connection with this club artificial manure was strongly recommended for mangold.

Mr. HATTEN said he believed sixty ewes to the hundred acres a proper number in addition to other stock.

Mr. WOODWARD remarked that he had a dairy of eight cows in addition to other young stock growing up.

Mr. M. MUMFORD observed that when the seasons were favourable he, like his neighbours, could make good plans, but the difficulty was to know how to manage in dry seasons to keep the sheep from going back. Mr. Mumford then spoke of stock keeping in connection with the length of tenure, and he expressed his opinion that the tenants did not get the length of tenure they had a right in fairness to expect, in order to give them the opportunities of effecting improvements. Many a tenant reasoned thus: "My landlord is a good fellow, and will not put me out." But money was a great temptation with the rich, as well as with the poor, and if another person offered a higher rent, in consequence of the improvement which had taken place in the land, it was a great temptation. He once did some good draining, when his neighbour said, "Won't you be cured the first dressing?" That land had been drained many years, and it did well; but he never did any more. When he did this he felt that he was a tenant for life; but afterwards, when he felt that he was not, he held hard (laughter). It reminded him of the fox and the grapes. The fox liked the look of the grapes, and jumped highly to get them. Had he felt that he was a tenant for life he should have had another jump, but he felt that he was not, and that it was wrong for him to go to this expense.

The discussion then turned upon the treatment of the ewe at the time of lambing, Mr. Thos. Lingwood expressing an opinion that there were many lambs lost through the ignorance of the person in attendance at the time of lambing; and Mr. Sutton remarked that the great error made was in being in too great a hurry.

The CHAIRMAN said he would ask Mr. Edward Lingwood what sheep were the best for heavy lands. He (Mr. Heigham) farmed some heavy land, and he only wished that

years ago he could have heard a discussion similar to that which had taken place that night, and then he should not have been the loser by sheep he had been.

Mr. EDWARD LINGWOOD then replied, and he said he believed the blackfaced Suffolks stood the land as well as any. Half-breeds, if there was a desire to sell early, did exceedingly well. Mr. Lingwood then referred to the various points that had been advanced during the discussion, and with regard to the system of yarding, he said he had tried it to some extent, but he found that the feet of the sheep became tender. He questioned whether a great deal of harm was not often done in turning ewes up to attend to their feet. He would rather

not have the foot-rot in his sheep, and, in consequence, he put them upon the land where they were not likely to get it. As to giving sheep mangolds, he approved of much of what had been said that they must be given to the ewes some time before they lambed.

Mr. PETTIWARD proposed a vote of thanks to Mr. Lingwood for his paper, remarking that the Club were now indebted to Mr. Lingwood for having introduced two subjects of great importance, the previous one being that of farming on the flat or heavy land.

The resolution was carried, and a vote of thanks to the Chairman closed the proceedings.

BRAMPTON FARMERS' CLUB.

THE GAME LAWS.

At the January meeting, Mr. George Coulthard, of Lancer-cott, in the chair, the following letters were read:—

Amphill Park, Amphill, Dec. 27, 1871.

Dear Sir,—I beg leave to acknowledge your letter of the 23rd inst., which I have this day received, asking me to write to you a few lines on the subject of local taxation, that you may lay them before the Brampton Farmers' Club at their next meeting. I have not their resolution before me; but, from my recollection of it, I believe I fully agree with it. I certainly wish many things that are now exempt from rating to be made liable to it—as I particularly mentioned at Carlisle—woods, minerals, and game. I believe that tenants have a much stronger feeling against game, when it is sold by the landlord; but I am disposed to agree with some remarks made by Mr. Bell—that if shooting is retained by the landlord—not for the sale of game, but for his amusement, or that he may make presents to his friends—he should also pay. I do not know if there will be much practical difficulty in dealing with the matter; I suppose when game is not preserved by owner or occupier, that land will not be liable to a game-rate. It should be the object of all taxation, including rating, not to press unduly upon any class, but to make it fall as equally as possible on all. There are at present irregularities which should be removed—omissions which should be filled up. I look, too, on the system of collection as hard upon the yearly tenant. I believe the Scotch system would remedy some of these evils, as, I think, a local board would be useful in calling attention to them, and in correcting them. I am glad to see that the Government intend to bring in this Session a bill on this difficult business. I hope it will be satisfactory and fair to all. Great good would, in my opinion, issue from a measure that would make the sales of land more cheap than they are.—I have the honour to be, your obedient servant,
C. HOWARD.

South Acomb, Stocksfield-on-Tyne, Dec. 28, 1871.

Dear Sir,—Your letter with resolution of Brampton Farmers' Club on local taxation has been forwarded to me by Mr. M. Stephenson, who is secretary to the Tyneside Agricultural Society, but not secretary of Hexham Farmers' Club. I shall lay your letter and resolution of your club before the committee of the Hexham Club, and shall let you know the result. It would be an advantage if there was, as you say, "a closer union of the several clubs of the district." I may mention that our club has had, on numerous occasions, before it the subject of local taxation, and twice, I believe, sent up petitions. I cannot, for my part, see any justice of relieving land of the taxation it now bears—the only result would be an increase in rent. Of course, we agree to taxing woodlands and minerals; but I decidedly object to taxing game—game is not property. The game question is being well agitated, and I believe there is only one thing for it, and that is—total repeal of the Game Laws. As a piece of class legislation, these laws are decidedly wrong. The Hexham Club goes in for landlords paying one-half of all taxes, as is the case in Scotland. By paying one-half, new taxes don't tell so heavy on the tenant, and, moreover, roads require great improvement, and vast sums expended on them—it is not equitable that the whole of the cost should come on the tenant. Good roads in-

crease the value of adjoining property; hence, the benefit to the landlords. And landlords, when they pay one-half, may fairly be allowed to take an interest in the roads, &c.—I am, yours, &c.,
WM. TROTTER.

The Rev. W. Dacre then read the following paper:—

In the few remarks I shall make on the subject of game preservation and the Game Laws, I shall not enter into any inquiry as to the origin or history of the Game Laws; but shall endeavour to confine myself to such matters of a practical nature as may bear upon the interests of agriculturists, with respect mainly to the evils resulting from an over-preservation of game, and I shall endeavour to point out such remedies for these evils as present themselves to my mind, with a hope that the subject may lead to thorough discussion by those who are interested in this much-vexed question. Having been asked to read a paper on the Game Laws by the secretary of our club—I am aware that the subject might be better handled by many others, both among the keen preservers of game and the tenant-farmers of the district; but, perhaps without sufficient consideration on my part I accepted the task, and until I set to work to jot down my own views and thoughts on the subject, I was scarcely aware of the many difficult complicated interests which would be affected in order to bring about any great change in the Game Laws. I may at the outset state that I have had some little experience both of the evil effects produced by the over-preservation of game, and also of the supposed material benefit arising from its strict preservation, and may be supposed to hold a neutral sort of position, and to state my opinion without being unduly prejudiced for or against either of the two parties who are interested in the question of the preservation of game. I trust, also, that I shall not be deemed egotistical if I state precisely what my own views relative to the preservation of game are. If the preservation of game extends only to winged game, I should probably be as zealous an advocate for the power of reservation of the right of killing game as the strictest preserver, with, however, certain restrictions; but with respect to ground game, and especially rabbits, I think no restriction whatever ought to be placed on their destruction by the occupier, but that they should be altogether withdrawn from the game-list for all purposes whatever; and that the tenant should have free liberty to keep them down by shooting or otherwise. I would here make the remark that in the Brampton division of Eskdale Ward, within the immediate area of the Brampton Farmers' Club, we see comparatively little of the evil results arising from excessive preservation of game, compared with what is experienced in many parts of the country, and even of this ward; but, nevertheless, on many a farm in this portion of East Cumberland, the injury inflicted by ground game is much greater than is generally imagined. To give an instance in point. A few years ago I let some shooting for £30 per annum on lands belonging to me, which had not been strictly preserved, and on which the tenant of the game, by word of mouth, undertook to keep down the ground game. The second year of the taking, the tenants of the farms complained to me that they were suffering great injury, especially from rabbits. I appointed a valuer to inspect the damage done, and viewed it myself also. The amount assessed as damages

came to somewhere between £90 and £100, which, in my opinion, was under rather than over the damage sustained by the farmers, to say nothing of the injury to their feelings in seeing the labour of their hands and the talent of their brains thus wasted by vermin. It may be objected that a landlord is at liberty to make whatever terms he chooses with his tenants, and that if the tenant chooses to take his land, subject to the condition that all the game is reserved to the landlord, it is no business of anyone else, and that the tenant will, of course, make his calculations accordingly. This, to a certain extent, is true; but it does not convey the whole truth. To illustrate my meaning I will take this part of the country from the Solway to Northumberland. Less than twenty years ago the principal proprietors of the district in Arthuret, Kirkcubton, Walton, Braampton, and Lanercost did not preserve strictly, although perhaps they may have reserved to themselves the power to do so. Practically speaking, the game on the greater portion of these was not strictly preserved, and the lands were let to tenants, who, knowing this, made their calculations accordingly. Since that time, however, the former proprietors have been succeeded by preservers of game, and the tenants suffer in consequence without any reduction being made in their rents. I may, however, mention that on Lord Carlisle's estates the farmers have within the last year or two been allowed to kill the rabbits on their farms. The strict preserver of game affects not only his tenants but also his neighbours injuriously in several ways. Say, for instance, that I join a preserver of the ground game, and what do I find? My hedges are riddled by the rabbits' burrows, my adjacent corn crops much damaged and destroyed (for it is not only the amount that the rabbits eat, but what they waste that is the injury), and my swede turnips almost a failure. In some cases which I could mention, the farmers find it useless to attempt to raise a crop of swedes in the vicinity of the woods where hares and rabbits are harboured. It is not, however, to his tenant or his immediate neighbour alone that the strict preserver of game does an injury, but to the community at large. I might refer to the damage done to crops, especially by ground game and which enables a less amount of valuable stock of sheep and cattle to be kept, although this might be worthy of consideration as affecting prices of butcher's meat, but I refer to other injuries. Where excessive preserving takes place, there poaching abounds. It is notorious that many of the best gamekeepers have originally been themselves noted poachers. How much, too, of the expense incurred at our various Petty and Quarter Sessions through the prosecution of poachers and their maintenance in prisons is defrayed by rates levied on the occupiers of land in the country? Added to this, the preserved land does not pay so high a rent as the land which is not preserved, or as it would do if let without reservation of game, and, consequently, does not pay its fair proportion of rates. It seems doubly hard therefore that, whereas the preservation of game increases the rates by requiring more police and great expenses to be incurred in prosecutions and maintenance of prisoners, the rates which the land so preserved should pay are being paid by the occupiers of adjoining lands, who are suffering in several ways from the preserved game. It may be asked what are the advantages of the Game Laws? Ist, they afford the owners of property a healthy exercise and manly sport, without which there would be reason to fear that, with our high state of civilisation and the numberless allurements of luxury and easy enjoyments of all kinds, our middle and upper classes would be apt to degenerate into effeminacy and unmanliness, as in the case of ancient Greece and Rome, and our national character as a hardy and athletic people would soon be lost. I admit the fact that our national sports have this good tendency, and I should be sorry to see them done away; but I do not admit, as a deduction, that therefore ground game ought to be preserved. Another presumed advantage is, that were the laws repealed game would become ere long extinct. This also I deny, and did time allow I would give my reasons in the remedy suggested by me for the present evils. I feel I have taken too long a time in dwelling at length on the evils I have described; but I trust I shall be pardoned if I detain you a few minutes longer in describing what appears to me to be the remedy for those evils. In the first place, I would say abolish the Game Laws as they now exist, and make the laws for trespass even more stringent than they are at present. 2nd. Let the landlord when letting his lands on lease or otherwise to his tenant

give the tenant free liberty to destroy all hares and rabbits if he chooses, and at the same time let him make a reservation to himself of the winged game. I have known this done by a large landowner in Worcestershire, who keeps no gamekeeper or wateher, but simply has an understanding with his tenants that he expects to find a good supply of game when he goes to shoot, and I believe he has never yet been disappointed. He finds the benefit to himself by a thoroughly good feeling existing between himself and his tenants; by a great saving of expense in not having, as formerly, to keep up a large staff of gamekeepers and watchers; and his lands are let to the best advantage. The goodwill alone which would thus be increased between landlord and tenant, and which is beyond any money value, would of itself be worth the whole of the imaginary sacrifice made by the landlord. 3rd. Do away with all perquisites to gamekeepers in the way of allowing them to have the rabbits on the farms. A great show of zeal is shown by this class of men in putting down large numbers of rabbits in the autumn, when fattened on the farmer's crops and stubbles; but in the spring time of the year, when the rabbits are breeding most numerously, the keepers will refuse to allow them to be shot, for fear of disturbing the pheasants and other game that are also breeding. But in many cases they have an eye to securing a good crop of rabbits for themselves in the coming harvest. 4th. If sportsmen desire to have a large supply of game, let them take a portion of the arable land into their own hands, and endeavour to grow good crops of corn and turnips on it, and an unlimited amount of game. They will soon learn by experience something of the farmer's feelings, who is expected to make up his annual rent, and at the same time to allow his crops to be decimated by a devouring army over whose numbers he has no control. I may state that in the neighbourhood of Penrith this is done by a large landowner. And, lastly, let no landlord let or give his shooting away to any one who has no interest but to keep up as large an amount of game as he can upon the land. Such a tenant of the game, as I have learnt by experience, has a directly opposite interest to the tenant of the land. His only object too generally is to secure his own selfish objects, being utterly indifferent to the interests of the cultivator of the soil. I would make one remark with regard to the gun-tax. This tax was originally brought forward to prevent Fenians and other desperate characters from carrying fire-arms. But it is not to be supposed that such men would ever on the one hand apply for a licence for their murderous weapons, nor on the other that they would be deterred thereby from carrying such weapons. It would be an interesting inquiry to make as to how many revolvers belonging to men of this class have paid the licence duty. But the effect of the gun-tax has been made to impose an extra tax on the agriculturist, as if he had not burdens enough without, and to make him act involuntarily as a wateher to keep up the hares and rabbits on his farm. Why should I have to pay 10s. a year for a gun licence and 2s. 6d. for a hare licence to keep rabbits and such vermin from destroying my crops? In conclusion, it is requisite that farmers should combine to state their grievances and have them remedied. For landlords to require the full rent for the lands, and to eat their growing crops without rendering any compensation, seems like the ease of a nation of old requiring a conquered people to make bricks when the chief material for the purpose was removed. The motto of landlord and tenant should be "Live and let live." The tenant would like to see his landlord come and enjoy good sport, whether it be in the hunting field or with the dog and gun. He only desires that consideration should be given to his feelings, his interests, and his rights, and that what is sport to his landlord should not be ruin to himself.

Mr. ROUTLEDGE mentioned that the late Sir James Graham had allowed his tenants to shoot the ground game, and having asked them to protect the birds, they had done so, much to his satisfaction.

Mr. R. GRAHAM, the Secretary, mentioned an estate, "not a hundred miles from that neighbourhood," where there were battues now and then, and in three days over three thousand head of rabbits were destroyed. On another farm there had been within a dozen of six hundred killed. And such was the licence within which these battues were conducted, that even the house in which the farmer resided bears marks of the shot that came from the guns on that occasion, and the glass in his windows was riddled. What nobleman or gentleman

would like to be so invaded in his castle or mansion? He believed that the taxes were increased in various ways through the preservation of game, and he would move this resolution: "That this club fully endorses the opinion that flying game alone should be preserved, and that all other ground game should be considered vermin, and treated as such."

Mr. FRASER complimented Mr. Dacre on his paper, which entirely enunciated his own opinion regarding the obnoxious game laws. Mr. Dacre was perfectly justified in saying that the Game laws were both demoralising and degrading to the people of this country. They were entirely the class legislation of the landed proprietors against the tenant farmers; and he was fully of opinion that if the latter would only make a decided stand as they had done in Scotland, more especially with reference to the ground game, over-preservation would soon be a thing of the past. He referred to his own paper read before the Penrith Farmer's Club, and said that afterwards he had had letters from all parts of the country giving him statistics and facts, and offering him assistance in a quiet and unostentatious manner because a big man was up in arms against him. This was a question he felt very much upon, and the tenant farmers would become more alive to the vital nature of the subject. They would then combine together, and before they sent a representative to Parliament, would ask the test question whether or not he would support a bill to repeal the Game laws, *in toto*. Mr. Dacre had been very moderate in his ideas, and had not gone so far as he would have done, for he went in for the total repeal of the Game laws. If a more stringent law of trespass were placed in lieu of these laws, it would have a much more beneficial effect. Mr. Dacre had spoken from two points of view. He was a landed proprietor, and consequently, to a certain extent, he must have the views and interests of a landed proprietor at heart. On the other hand, he was an enthusiastic farmer, and any man who had effected so many improvements in his property as Mr. Dacre had done, would be greatly grieved to have his crops of swede turnips and other crops destroyed by hares and rabbits and such vermin. The opinions expressed by Mr. Dacre came very well, indeed, as they came unbiassed, and not from one point of view, as his own had done. If the necessity of the repeal of these laws were pressed on every county member we should soon, he hoped, have it effected.

Mr. DACRE expressed his approval of the abolition of the Game laws, and making the law of trespass more stringent. He liked to see game, hares and rabbits on his land, but he would not like to see them beyond control. When one man lets a farm to another and reserved to himself to keep as many hares and rabbits on it as he chose, it was just as sensible as

another man trying to let a shop to a grocer, but, being fond of rat-hunting, stipulated that he should keep an unlimited number of rats in it. The only difference would be that the grocer was not such a fool as to take the shop on such terms, but the farmer was too dependent. He referred to the frequent loss of life in poaching encounters, and said the whole of the game in the country was not worth one man's life. This immoral tendency alone ought to be a strong inducement to give up a law which had such iniquitous results. There was another point which he ought to have mentioned. There were large quantities of land in this country unreclaimed, and owing to the lords of the manor having right to shoot over these, which right they would lose if the land were reclaimed, the Game laws acted as a great barrier to the cultivation of land. If a tenant had full liberty to kill rabbits and hares, the rest of the game is that which, in his opinion, does him more good than harm; therefore he would go in heartily for anything that would encourage their preservation. He believed that the repeal of the Game laws, and the passing of a more stringent law of trespass, would meet the tenants' view, and those of the landlord too, if it were understood that the winged game might be reserved. The difficulty in getting such a law was increased by the fact that most of our legislators were game preservers themselves. He proposed the following resolution: "That a memorial be forwarded to the members for East Cumberland, to be laid before Parliament, praying for a repeal of the present Game laws, and to make the law of trespass more stringent." Before sitting down, Mr. Dacre claimed his "call," and suggested that a paper should be read on the inequality of the rates and the income and other taxes. There were certain injustices done under the income-tax, and they had suffered very much in this district from the house-duty tax.

Mr. GRAHAM withdrew his resolution in favour of that of Mr. Dacre, which he quite agreed with, though, not having heard all the paper, he did not think that gentleman would have gone so far. The motion was then put and agreed to unanimously.

Mr. CARRICK, coroner, believed that the Game laws caused a great deal of misery in families, together with loss of life, and many other sacrifices; and he held a great many inquests on persons whose lives had been lost under them.

Mr. FRASER, so far as the Game laws were concerned, would never bring the subject before the Penrith Club again, for in that quarter he had given up all hopes. Not three hands would there have been held up in favour of such a resolution as they had passed to-day.

A vote of thanks to Mr. Dacre and to the Chairman brought the proceedings to a close.

THE GAME LAWS.

A large number of the electors of East Cornwall met their senior representative, Sir John Trelawny, M.P., in the Liskeard Guildhall, at his invitation, in order to confer together on the Game-laws. Mr. Raby, mayor of Liskeard, was called to the chair.

Sir JOHN TRELAWNY said he had the more satisfaction in bringing the subject of the Game-laws before his constituents because Cornwall was a county that had very often been ahead of the rest of England. He recollected his father telling him that in the Reform movement Yorkshire and Cornwall were the two first counties to declare themselves in favour of the Bill. He hoped, therefore, that Cornwall would not be backward upon the present occasion. The question of the Game-laws had been dealt with on both sides of the House for the purpose of political capital without anything being done. It was time that an end should be put to this state of things. There was a grievance, and it ought to be got rid of. Since his election for that constituency he had thought it desirable, for many reasons, that he should do nothing towards weakening the hands of the Government, which had had under its charge great measures affecting the interests of the empire. Not that he had always approved of the acts of the Government. The record of his votes which he had in his hand would

show that whenever he had thought them wrong—as he had sometimes done—he had always voted against them; and he now believed that the time had come when this most vital subject should be dealt with. He was rather a veteran in relation to it. Thirty years ago he had first appeared in that town-hall with the present Sir Robert Collier. That was in the days before protection was abolished. And not many years later—in 1845-6—he formed one of the committee on the Game-laws moved for by Mr. Bright, which sat for two years and produced the report which he held in his hand. At that date it was said that the farmer could not live unless he obtained 56s. per quarter for his wheat. What was the price that day? [A VOICE: "58s."] When that statement was made it was suggested whether there were not some circumstances connected with agriculture of considerable difficulty, and which tended to make it impossible sometimes for a farmer to raise his rent out of the estate which he held—whether it was not possible that there was often production in one particular line which might do injury to the crops of the farmer, whether there might not be such a thing as an over-production of game. Well, in consequence of this, the committee of which he spoke was moved for; and although the Government of the day had considerable power in it, and

although the resolutions which Mr. Bright moved were not adopted, still the report of the committee indicated the necessity of an improvement in the Game Laws, and would, if acted upon, have made considerable changes in the law, particularly as regarded the question of cumulative penalties for poaching, some of which still remained in force. It was resolved by the committee that the penalties for sporting without a certificate appeared excessive, and that the time for giving notice of appeal should be extended. It was considered, in fact, that the evils connected with the Game Laws were growing evils, and ought to be dealt with as soon as possible—yet from that date to the present these laws had remained, and it was for the agriculturists of that district to show (if it was their opinion) that they did not think the question was upon a satisfactory footing. There had, however, been several attempts to deal with the subject, and he held in his hand the five bills which had been introduced for that purpose. His views upon the subject had been expressed in the letter which no doubt many of them had seen, but he would proceed to state them at greater length. First, there was the bill of Mr. Peter Taylor, which was for the total abolition of the Game Laws. He confessed he did not see his way to a proposal of that sort—to the doing away with the laws without a penalty attaching to the act of trespassing upon a man's land with the view of destroying anything thereon. A man might come upon an estate, if there were not some means of enforcing an objection, until he set up a claim to the property. The permission of continued poaching upon a man's property, which the unconditional abolition of the laws would involve, was a matter which affected tenants as well as landlords. Were they prepared to see poachers prowling by night over their estates, where they had no right to come, without any power to tell them they must be off? ("No, no.") There was an intrinsic feeling of justice in the case, and he had never been able to say he was entirely against game laws, because he felt there must be some means of dealing with a person who thus prowled about. But this was a very different thing to defending cumulative penalties, or the power of instituting costly and vexatious proceedings. In eleven years he had done all he possibly could to get over this difficulty, but there was scarcely any plan that was not open to objection. Recently he had tried that of Mr. Sturt, who put confidence in his neighbours, kept no keepers, and had as much game as he wanted. But though he (Sir John) thought the present state of the law untenable and most impolitic, he saw difficulties even in this plan of Mr. Sturt's. He knew a place where there was no keeper, and where, in consequence, there was not only evening poaching, but parties went into the woods with ferrets regularly on Sunday mornings, causing a great scandal to the neighbourhood. These were facts that made people stop and think whether it was altogether possible to do away with punishment. [A VOICE: Trespass.] Well, they might have a law of trespass, but if it was to be effectual it would only be another Game-law. Any punishment for mere trespass would be only nominal. The party procuring it would be laughed at, and the offence repeated again and again. Mr. Taylor was the Nemesis of neglect. It was with the Game-laws as with other matters—when grievances were not remedied people came forward who went for the entire abolition of that out of which the grievances arose. And in so doing in this case they would get rid of one remedy for admitted evils before they provided a new one. They might retort the argument upon himself by calling him the Nemesis of neglect on the church-rate question. Well, perhaps he was, but he had always felt, when advocating the abolition of Church-rates, that there was no danger whatever of the fabrics of the church not being supported. The event had proved that he was right. Not only had existing fabrics been maintained, but some of the finest specimens of church architecture which they possessed had since been erected. But the case of the Game-laws was not parallel. Their total abolition would not provide any remedy against the trespass which they desired to prevent. Mr. McLagan's bill applied particularly to Scotland, and did not deal with the whole question. Mr. Hardcastle's bill would not be listened to for one moment in these days. It proposed to make game property, and to treat the poacher as a thief. It had another defect; under it any one might trespass and kill what game he pleased with impunity, but if he picked a bird up then he would be proceeded against as a

felon. Sir H. Selwin-Ibbetson's bill had many important points, but still in his opinion it could not be regarded as a settlement of the question. It dealt with the letting of game, which was a most important point. It seemed exceedingly hard that a landlord should be capable of arranging with his tenant to take £20 instead of £50, in order that he might have the enjoyment of the value of the £30 in the shape of game reserved, without any contribution being made to the rates in respect thereof, seeing that those rates were applied to punish offenders against the Game-laws. It might be said that the owner had a right to do what he liked with his own, but there were the rights of the ratepayer also to be considered; and it was a very important question to him whether his money should be taken to enable the landlord to be satisfied with £20 a year in money, when under different circumstances he would be entitled to £50. And there was another point: If the landlord told the tenant he was going to keep so much game the tenant could calculate accordingly; but supposing he kept a larger quantity, or "young master" came to the estate and did so, where was the tenant then? He had no claim for compensation, and was afraid to say much about it because he thought it quite possible that the result might be unpleasant. He (Sir John) could not help recollecting that until very lately they had had a landlord's Parliament; and that it was really only within recent years that it had been unnecessary to have a qualification in order to shoot game at all. The landlords had had a great deal to do with the enactment of the laws which affected the rent. In England they had the law of distraint, and in Scotland the still severer law of hypothec. Under these laws if a tenant had all his crops destroyed by game, he still could be made to pay his rent in full. A contract between landlord and tenant which permitted this was contrary to public policy, and should be void for uncertainty. A promise to do that which was impossible must be void, and a promise to pay rent for an estate when the game ate down every single blade was impossible of fulfilment, and should be void accordingly. There was a very large acreage over which tenants had the right to kill hares and rabbits, and he saw that some chambers of agriculture had expressed an opinion that if the tenant had a right to kill off the four-footed game, the evil of the Game laws would be removed. But what about the woods which interlaced the farmers' fields. His experience was that when farmers were allowed to destroy the game in them, they found that whilst they were very good at producing food for the hares and the rabbits, they were clumsy at killing them. He believed the best course would be to employ a trapper and clear off the rabbits, leaving only so many hares as were required, or killing all if needful. But even that did not get rid of the farmers' grievances. Supposing 1,500 pheasants were turned down for a battue for some great lord or other, what was the tenant to do then? The fact was that the subject required to be dealt with on a larger and more comprehensive basis. Some of the bills of which he had spoken contained too much, others too little; nor was the bill of the Government at all more satisfactory. Now the report of the committee to which he had alluded would well pay perusal. It contained the evidence of 72 witnesses, among them such people as the Duke of Grafton, Lord Hatherton, Sir Harry Verney, and Mr. Pusey, besides a number of experts; and they spoke out pretty plainly. The Duke of Grafton would destroy all hares; Sir Harry Verney had given up game-preserving, because it destroyed a fourth of the crops; Lord Hatherton believed game-preserving and improvement of land perfectly incompatible; Mr. Pusey held that the modern system of farming was not consistent with the preservation of wild animals, except under artificial means. Mr. Phillips, under-Secretary of State for the Home-Office, pointed out defects in the administration of the law. The magistrates were a most honourable body of men, but they were not all versed in the law; they had often acted in excess of their powers, and their judgments in different parts of the country were frequently contradictory. Mr. Phillips also showed the effect of the cumulative system of penalties, under which in those days a working man might be mulcted in £35 for killing one rabbit. The effect of all this was that people in the neighbourhood of a person convicted, so far from sympathising with the owner, sympathised with the poacher. This was an evil, because the laws of a country ought to have the general sympathy and approval of the people of that country. He (Sir John) would rather have these cases dealt with by the county court judges. He wished

to say nothing disparaging of the magistrates; but the county court judge would be a kind of arbiter between the two. He would know the law; there was always a bar present, whose acquiescence in effect his decisions would have. The press would also be represented, which was not the case when these matters were dealt with in out-of-the-way holes and corners; and, finally, a greater regularity and accord in the decisions would be secured. Then the right to buy, kill, and sell game should not be limited by certificates. The whole thing might be swept away at once, and probably some provision for a fence time substituted. If necessary, a rather severe law might be framed with regard to persons who might be convicted of intruding to commit some attack upon property, and who might often be burglars, intending to plunder the tenant as well as the land. Cumulative penalties should not be inflicted; and there should be a legal remedy by action for damage done to farms by game on adjacent estates. When Mr. Bright's resolutions were rejected by the committee of 1845-6, he had prepared others which were also rejected, but which he found represented pretty nearly his views at the present day. He believed that keepers had done a considerable amount of injury in the killing of kites, hawks, owls, weasels, stoats, cats, and the like. All he knew was rats had wonderfully increased; and he had thought of advertising in the *Morning News*, "Wanted, weasels for certain estates in Pelynt." Many of the animals that were thus killed were really beneficial to agriculture; and thus they saw another evil effect of the Game-laws. In conclusion, Sir John, whose speech occupied an hour and a quarter, stated that he had brought the matter forward from an earnest desire to do what he could for the promotion of agriculture and the benefit of agriculturists.

Mr. C. SPEAR went for total abolition, and denounced the treacherous character of gamekeepers.

Mr. Bowhay seconded this.

Mr. Row thoroughly endorsed Sir John's views, and moved a resolution expressive of approval thereof on the part of the meeting, and a hope that Sir John might long represent East Cornwall.

Mr. Bishop seconded this.

Mr. W. SNELL said that three years ago Sir Massey Lopes and other landlords had told the Devon and Cornwall Chamber of Agriculture that if the farmers only waited something should be done. They had waited, and things were worse than ever. He knew one estate in that neighbourhood from which more sacks of rabbits and fewer of wheat were sent yearly; and they saw what had been done at Ladock, where the attempt to search a tenant-farmer had been met, as it ought to be, by the farmer knocking the keeper down. He wished some of the landlords would try the right of search in their own persons and meet a similar reward.

Sir J. TRELAWNY remarked that he had voted against the Search Bill.

Mr. W. SNELL believed that if they could get rid of hares and rabbits they would do, as the winged game would be of very little consequence, and moved accordingly that the tenant by legislative enactment should have full power to deal with them as he pleased.

Mr. Raby, sen., seconded, and the motion was supported by the Rev. Mr. Berkeley and Mr. Dingle.

Mr. N. STEPHENS advocated total abolition, and on a division the motion to that effect was carried by a very large majority, neither of the other having many supporters.

Thanks were then voted to Sir John Trelawny and the mayor, and after cheers for Sir John the meeting separated.

KINGSCOTE AGRICULTURAL ASSOCIATION.

The December meeting was held at Hunters' Hall Inn, Colonel Kingscote, C.B., M.P., in the chair.

Mr. B. DREW read the following paper on Fences and Hedge Row Timber. I have been called upon to bring forward to your notice a short subject on fences and hedge-row timber, and short it must be to make room for the unfinished discussion of the far more important subject which Mr. Burnett gave us last month. Insignificant as my subject may appear to be, I trust you will all agree with me, whether steam cultivation gets into general use in this neighbourhood, or we cleave to the old system of cultivating our land, that it is desirable that we bestow a few thoughts on fences and hedge-row timber. Time was, and that I am informed not 80 years ago, when fences were few and far between, and since then many of them have been put up in a very random kind of way, for we know lots of fields that have eight or nine corners in them when there is no need of more than four. Many fences are as crooked as my subject will probably be, when they might be as straight as an arrow. Many acres of both arable and pasture land could be made in England by putting the fences more like the lines on the chess-board, and the present quantity more easily ploughed, sown, reaped, and mown. There are many obstacles in the way, I will own, to the making many fields of the shape that we could wish, such as boundary fences, railways, &c.; but, where it can be done, I think we should do well to put our shoulders to the wheels of improvement, and push them in the direction of our fences. With respect to the width and height of hedges, perhaps I shall tread on very tender ground, or at all events, I shall tread very heavily on my own toes when I say that I uphold a well-trimmed, well-kept fence—a fence that a good hunter would have to look well to what he was about before taking it, and land safely on the other side. I mention such a stiff fence because, if kept out much closer, the hedge, after a time, in my opinion, would be, as I believe should be, by being kept short, rather withered. The late Lord Ashburton's plan of cutting hedges, where there was a double row of quick, was to cut one row down to the ground, and, after two or three years, cut down the other row; but I

cannot say much in its favour, never having seen good hedges where they were so served, and his tenants did not follow his lordship's plan. I do not know of a better way to serve hedges when they get old than have them staked and heathered, and have all briars and other worthless stuff extracted from them. I cannot too strongly condemn the cross-thorn and the yew bush—the former causes the corn to blight round it, the latter is injurious to cattle. I speak from experience, not from old wives' fables, with regard to the yew tree being poisonous, both in its green and dry state. But, like Thomas of old, there may be some present hard of belief with respect to the corn being more subject to blight near the cross-thorn; but I have proved by experience that it is, having seen the blighted spots near the cross-thorn when in no other part of the field. The weeding of hedges, in my humble opinion, should be carefully attended to, particularly as to thistles and docks. "If weeds grow apace," and should be prevented doing so wherever they are known to grow. I have heard it remarked that thistle-seed will not grow when blown away, but some of us in this room have proved it to be otherwise. My late brother Edward grew some in pots, on which he tried the experiment, by blowing the seed across the room. Last summer I had so very many thistles in my young seeds, that I thought I must have sown thistle-seed; but when I came to consider that my brother William, at Bowdown, had some seed from the same lot without thistle-seed, I began to think otherwise, and so I do now. Mr. Peters, on Serubbet's Farm, had a quantity of thistles on a piece of seeds, close by a plantation; and the farther from the cover the less thistles there were; and in the fields that I had the nearer the woods the thicker the thistles. But much as I am convinced of the thistle-seed blowing and growing, we should nevertheless be always careful to look well to the quality of our seeds. Where ditches are required they should be carefully cleaned out, but in many places on the Cotswolds I see no use for a ditch; and my reason for condemning them, where I can, is that I have had a few sheep die on their backs in them at different times. Rough grass should not be permitted to grow long, for it encourages those

worst of all pests to farmers the rabbits, and there are not many of us who wish to do that, I am sure; for who can keep a good hedge or grow a good crop of corn where they are permitted to dwell? I cannot speak too strongly against rabbits, for, I am quite sure if landlords as a body could see and feel as they ought to do with respect to them, and as I am quite sure Colonel Kingscote feels, there would be thousands more of happy homes in England. How can a farmer be comfortable when he has tried his best to secure good crops and afterwards sees them eaten up by rabbits? I will now say a few words on stone fences. I cannot say much against them, but I would say something in their favour. How many comfortable buildings are made of stone walls! This room would feel somewhat chilly with ever such a good hedge round it, if it were not for these four stone walls. Our sheds and yards too would be the same for our cattle; and one would almost be led to suppose thereby that walls must keep the wind off our fields better than hedges. With regard to the fly, I have often observed cattle very restless between hedges, when they have been comfortable between walls. Stone walls, if properly kept up, make good fences, but if neglected, like all other fences, often cause pounds of damage, from cattle and sheep getting in to the standing corn or grass. It is vexing at the best of times to see cattle trample down a lot of corn, but when it is through the farmers' own carelessness it is doubly annoying. When fences get old their cost is something like that of old harness, that costs more to keep it in repair than new would cost. Mr. Burnett can bear with me with respect to the old harness, for he once gave it up, and had new, and was in pocket by it. I have been rather surprised to see what had foundations some walls have been built upon, when a little extra digging would have secured a good one; hence the many falls after an abundance of rain. The walls themselves vary in height as much as do giants and dwarfs, and even in the same wall we see them a height of seven feet in one place, and a few yards farther on a height of about two feet. Can it be wondered at that our own and our neighbours' cattle occasionally eat of the same pasture? In these days of foot-and-mouth disease we cannot be too careful in keeping our fences good, and our cattle at home. Another reason for good fences is that if cattle get out a few times they learn the habits of the rover, and are never satisfied at home. We should therefore try to have the best of fences, and I believe we cannot have a cheaper or better one than a good stone wall about four feet high, or at all events one high enough to keep the cattle in, without risking the neck of the horse and its rider. I say the "good" rider, for a bad one risks his life over a two feet wall. To bear me out in what I say, that we cannot have better fences than walls—where there has been one edge made to part fields in this neighbourhood lately, there have been 100 walls, where stone can easily be dug on the land. It is a cleaner fence, both as regards the weeds and the rabbits, than the hedge. But I will not run down either the wall or the hedge; both are useful even to us on the hills, and what must the hedge be to those who farm in the charming vale of Berkeley? Although the good trees do much damage to hedges, I am not going to speak against them; it is to those worthless pollards and lots of others that I wish to apply the axe at. They neither add to the beauty of the landscape nor put a fraction in the landlord's pocket; but their roots often come in contact with the plough and its tackle, causing lots of damage in a few years. I have known searifiers never go so well afterwards by getting in the roots, and where there are many such trees, it is almost impossible to keep a good fence, either a hedge or wall, for the tops kill the hedges, and the roots throw down the walls. I had leave about twelve months ago to cut down a worthless tree. I found that its roots ran under a wall and it threw down a rod, and often two, of wall twice and thrice a year ever since I can remember. I need scarcely say that I cut it down. Several similar cases have occurred on the farm I occupy, but not to the extent of damage; but two cases of greater loss—one in which an ox got hung in the branches of a stick, and died in it; and the other happened a few weeks ago, where the death of a yearling happened, by its slipping into the water under a limb of an old tree in Ozleworth brook. I have often seen hats fall, and I was going to say almost heads too, by coming in contact with the low boughs of trees, generally speaking of worthless trees, for trees of any value usually carry their branches higher. If landlords would condemn the worthless trees, as wolves were condemned in England many years ago, even by slaying the

last one of them, I do not think anyone would sing the old song over them:

Woodman, spare that Tree.

Now for gates. What shall I say in respect to them? First of all I would look at the posts, and see if they are good and firm in the ground, for if the hanging-post is loose, very likely the gate drags along the ground, and gets injured by so doing, and often left part of the way open, when the cattle get out and do lots of damage; and if the falling-posts are loose the wind blows the gate open, and the gate itself should ever be kept in good repair. Whatever the excuse be for having bad gates and posts, such excuse will never justify those whose duty it is to keep them up or see that they are kept up.

The CHAIRMAN agreed with all Mr. Drew had said. There was no doubt but that it would be great economy to have many of our fences put straight; and in the vale there surely were too many fences, and by far too much timber in the hedgerows. To have good hedges the management must be very different. There was a great difference in the appearance of hedges in Leicestershire and Gloucestershire. He did not believe in the system of planting hedges on a bank, and when they were cut leaving the thorns in the ditch or on the bank. There could be no really good fences where there were many rabbits. As farmers had the hedges to keep, they ought to be placed in the position to do so properly, and have a right to kill rabbits. On our hills walls made the best and cheapest fence. He believed that if they were properly put up on a good foundation, there would not be so many shards after heavy rains.

A discussion followed, on the various systems of planting and training, &c., in which Messrs. H. Hayward, Bennett, Blackwell, C. Holborrow, and J. Harding took part, and the following resolution was carried:—"That hedges ought to be planted on well prepared soil, nearly on a level with the surface of the field, should be kept low as long as they are thick at bottom, carefully weeded and free from rabbits. Stone walls are preferable where stone can be got. The fewer trees in or near the fence the better, and no useless ones allowed to stand."

A vote of thanks was acknowledged by Mr. Drew; and the discussion on the subject under consideration last month was then resumed.

THE NORFOLK AGRICULTURAL SOCIETY.

At an adjourned meeting of the Norfolk Agricultural Society, Mr. C. S. Read, M.P., presiding, for the purpose of electing a President for the current year. The following letter was read from Mr. F. Knollys:—

Sandringham, King's Lynn, Jan. 5.

Dear Sir,—With reference to the meeting of the Norfolk Agricultural Society which is to be held at Norwich to-morrow, I am desired by my father to say that you are at liberty to make an un-official communication to the effect that he understood from the Prince before his Royal Highness' illness took place that he would accept the office of president of the association with great satisfaction, on the condition that the meeting should be held at Lynn.—Truly yours, F. KNOLLYS.

The CHAIRMAN said that it was most desirable that His Royal Highness should accept the office of President, more especially as he lived in Norfolk during part of each year. The acceptance of the Presidency by the Prince would confer a great honour upon the Society and upon the farmers of Norfolk, as the chair now vacated by one of themselves would be occupied by the future Sovereign of England.

The Prince was then unanimously elected to the Presidency, and it was also agreed that the next year's meeting should be held at Lynn.

COL. FITZROY moved a resolution to the effect that the members of the Association in general meeting assembled, desired to express their heartfelt thankfulness at the improvement which had taken place in the condition of the Prince of Wales, and also their earnest hope that His Royal Highness might with the blessing of Almighty God be soon restored to perfect health.

The CHAIRMAN said he would take it for granted that this resolution was carried unanimously.

The proceedings then terminated.

FARMING IN IRELAND.

BY THE NORTHERN FARMER.

For a considerable number of years back, dating as nearly as possible from the failure of the potato crop, when the change of the times produced by the gigantic calamities through which the country then passed caused the payments for labour to be made more in cash than in kind, Irish agriculturists have been divided into two great classes, each class following an exactly opposite and distinct course, in cultivating the land from which they derive a living. Each partly maintains nay, even brings forward statistics to prove that the system they follow is the correct one, not only for promoting their own individual interests, but the good of the country at large. The two sections are thus constituted: first, those who ignore labour, whose every effort is devoted to its expulsion, the preservation of the land in grass, and whose constant endeavour is not to live by cultivation, but by a species of management, which aims at an easy life by the profits derived from grazing cattle and sheep, whatever the quality of the land, whether suitable or not for such a purpose. The well remembered and oft quoted saying of the late gifted Lord Carlisle, that Ireland's destiny was to become the fruitful mother of flocks and herds, is ingeniously constructed into a prophetic warning that the growth of grass and raising cattle would in a few years entirely occupy the time and take up the attention of the Irish farmer, and that although the stock might have somewhat hard lines during a severe winter and spring, the abundant grass of summer and autumn would amply make up for all previous drawbacks and deficiencies. The favourite argument of this class is that there are no heavy bills running up, and all such items as seeds, manures, and expensive implements quite uncalled for. A farmer, instead of being a drudge, compelled to be up betimes to look after a staff of workmen, who unless he did so would speedily impoverish him by their carelessness and neglect, leads a life of ease, comfort, and contentment, his total outlay in the way of labour, the payment of one man, who attends to the stock and reports progress at stated intervals. On good land this system can be successfully carried out, both store and dairy stock getting tolerably over the winter without the shelter of a house, and receiving a daily allowance of hay, thrown on the pastures. The opposite section also quote the same authority, but give to the well-chosen words, and beautifully rounded periods of the amiable and popular nobleman who uttered them, a totally different construction. They maintain that the soil of Ireland, to enable it to become a land of flocks and herds, should be intelligently and diligently worked, large capital employed in its cultivation, and a course of husbandry followed which will embrace the employment of a regular staff of labourers, encouraging them to remain in the country instead of driving them out of it, the use of the best implements and machines, and the growth of a large breadth of green crop, to give abundant food for live stock during the winter. It might very easily be supposed that the latter have the best of the argument, more especially when they carry out in practice what they profess in theory, and show by the quantity of corn they can grow, and the heavy stock they can at the same time hold and provide food for at all seasons, that the conclusions they have come to with regard to the most profitable methods of farming are based on sound reason and common sense. Statistics are altogether in

favour of working the soil on a regular system of convertible husbandry, its products being so immensely increased, the stock kept of better quality and vastly greater numbers, labour regularly required and fairly remunerated, and individual and national prosperity promoted in a degree altogether unknown and totally unattainable by the system which seeks, by a selfish seclusion, to shut out all participation in the benefits to be derived from the culture of the soil, with the single exception of the occupier himself and his own immediate family. The large breadth of waste land in Ireland capable of being improved by being put under a proper rotation, and by the expenditure of a little money per acre, but which at present affords but a wretched subsistence for a few miserable half-starved animals, is the strongest argument of all in favour of regular cropping against the let-well-alone system, which dooms vast tracts of country to a state little better than that of desolation and solitude.

A few weeks ago, having accepted a long-standing invitation to visit an old friend and fellow-countryman farming in the county of Cork, I had an opportunity of seeing a farm worked on one of the most popular systems of modern husbandry, viz., a six-course rotation, not however slavishly adhered to, but extended or shortened according to necessity or convenience, an extra crop of corn being taken if the condition of the soil warrants the interruption, or the grass extended for a year or more, if the extra good quality of the pasture or the exigencies of the season render such a course desirable. The rotation is as follows: 1st oats, 2nd green crop, 3rd corn, 4th hay, 5th and 6th pasture. The regular course may be broken if necessary by letting wheat follow the green crop, haying down in the following year with barley or oats. This break is left altogether to the discretion of the tenant, and may with great propriety and excellent results be carried out, when the field is naturally a good one, and besides in high manurial condition at the time. From a few notes taken on the spot, I have written out this short article, which may not prove uninteresting to the readers of *The Mark Lane Express*, referring as it does to the agriculture of a country in which the Farmers of England have such a direct interest, so much of their store stock being drawn direct from its pastures. The buildings on this farm are of modern construction, the house large and commodious, and the whole range of buildings, stables, feeding-stalls, barn, engine-house, and straw-shed, so regulated as to afford every facility for feeding the stock while they occupy the stalls, the preservation of the food and litter from injury by exposure to the weather, and economy of labour, the latter requiring quite as much attention in Ireland as in any other country, so great has been the change brought about by emigration, and various other causes. The extent of this farm is nearly 300 acres, on which there is not a bit of waste; and being worked on a six-course system, it gives as nearly as possible 46 acres each year for green crop, a little under or over, according as the acreage of the fields may be lesser or greater. Forty-six acres of green crop, with a proportionate quantity of corn, implies a large amount of labour, demanding the continual attention and supervision of the farmer himself; any one living solely by land and above being his own manager, having but little chance of success, the work falling continually

behind, and much of it badly done. Unlike the great bulk of farms in the neighbourhood of Cork city, the dairy is not an important feature, the green crops being principally used in stall-feeding bullocks, two lots, if at all practicable, being turned out in the course of the feeding season. This could not be accomplished but for the excellent grass-growing capabilities of the soil, and its good fattening qualities, the first lot when tied up about the first week in November being *good beef*, turning out *prime* for Christmas and first fortnight of January, after a couple of months' turnips and a liberal supply of cake. Another lot is in readiness to fill the stalls as vacated; but these being more properly stores, are not sufficiently fat to be got rid of sooner than end of May or beginning of June. The top prices realized are £27 each for three-year-old bullocks, when properly finished, from £18 to £22 for two-year-olds, although at times as much as £26 10s. has been got for the latter, when prices happened to be exceptionally high from local scarcity, and for yearlings from £11 to £13. I saw nothing that convinced me so thoroughly of the excellent qualities of the soil in this locality, as the condition and value of the present year's calves, and the price realized for those of last year, a portion of them having been sold fat in the first week of June at £12 each. Merely fat calves worked up to such a price at a far earlier period of their existence, would be no matter of surprise; but cattle that got only store-feeding, out by day and housed by night, with a little hay and turnips to eat during the entire winter, and that made one pound a month at the age of twelvemonths, certainly leaves but little to be desired in the shape of improvement. Up to the date of my visit, 1st November, none of the cattle were tied up, there being no necessity for it, the weather, although wet, being mild, and the pastures clothed with such rich abundance of grass, as to remind one forcibly of a very growthy month of August. The strong rich grass, green as a leek, looked as if it would carry a heavy store stock right through the winter on to next seasons' growth without roots, fodder or shelter, other than that afforded by the fences. The tenant's mode of availing himself pecuniarily of this abundance, is to purchase sheep to clean up the pastures on the removal of the cattle to the feeding stalls. By the end of January these sheep are cleared off thick fat, giving the whole range of the pastures to the breeding ewes during the spring, a good rough bite being still left for them, unless nipping frosts have been unusually prevalent, and the weather otherwise severe. The occupants of the pastures awaiting the first break in the weather, as the signal of removal to the stall, were 30 bullocks and ten heifers, varying in age from two to four years. The top animals of this lot would run from 5½ to 7 cwt. dead weight, and were value for close on £20 a head to the butcher. It would be hard to find better animals for feeding purposes than these were, and going in fit to kill, a very short period, with a liberal allowance of cake along with the roots, would finish them splendidly. Putting in lean cattle to fatten on expensively-grown and purchased foods, scarcely pays under almost any conditions, in any country, the food consumed during a protracted period being enormous, absorbing with the working expenses the whole of the margin remaining after deducting prime cost. In connection with stall-feeding cattle, it appears to me to be an indubitable deduction that the feeder who is so fortunate as to possess pastures of good fattening properties, is the only man who can calculate on a good profit with any degree of certainty, the stock requiring to be made nearly fat by a less expensive process than that of tying by the neck, and forcing with roots and oilcake.

As already stated, the dairy is not a leading feature on

this farm, in which respect it differs very materially from nearly every farm in the district, butter-making and rearing calves being the branches of husbandry principally attended to. As an illustration of the extent to which dairy farming is carried out in the immediate vicinity of the city of Cork, I may mention that the farm bounding that which I am describing feeds a standing herd of seventy cows—all splendid animals, of pure Shorthorn descent by the sires, the latter being invariably purchased from breeders who use hired Booth bulls continuously. The fine waxy horn, rich colours, straight backs, broad hooks, well-filled thighs, and great weight of carcase, showed the origin of each individual member of the herd most unmistakably. To look at these cattle as they slowly wended their way to the homestead to be milked, was a sight capable of affording an agriculturist, whatever his nationality, a vast amount of gratification, and to an enthusiast was well worth going a great distance to see. The produce of this dairy is converted into butter, and sent fresh by rail to Dublin, a distance of 160 miles, where it commands a price considerably over the current market rates. Belonging to the same owner was an equally fine herd of young cattle of different ages, many of them having the distinctive marks of pure-bred Shorthorns, requiring only the care usually given to a select herd by wealthy owners to bring large prices, if brought to auction and extensively advertised. This *en passant*. The sheep stock on my friend's farm is, for the most part, managed in a way becoming very popular in the south of Ireland, viz., to purchase the greater portion of the breeding ewes every season, a few choice specimens only being held over while they continue useful, the lambs sold fat early in the summer, and the draft ewes cleared off in small lots as soon as they get themselves into saleable condition. The first sale of lambs has been occasionally made as early as the middle of April, in which case the ewes have abundant time to become fat before mutton has sensibly fallen in price. So near Cork as four miles there is not the slightest necessity for taking stock of any kind, either to fair or market, dealers being only too glad to purchase in the stall or on the pastures. So quickly is this kind of business done at the present day, that an animal may with all ease be grazing on the verdant slopes of Blarney or a spur of the Galtees on one day, and in little more than twenty-four hours afterwards its quarters exposed for sale in the shop of a Bristol or Bath butcher. In holding over breeding ewes from one year to another, the preference is given to twin-bearers, so as to secure a good fall of lambs, the succulence of the grass enabling the ewe to rear a couple easily. The average of the present year's crop of lambs was 30s. each, some of the twins going off early in May, thus returning £3 for the offspring of a single ewe, making in all £3 10s. when the price of fleece is added. The idea of specially selecting twin-bearers was to me altogether original, but it appears an excellent one, only fit to be carried out, however, on farms where liberal treatment is the rule and not the exception. In following out this idea, the owner of this flock told me that he had in one instance kept a ewe until she was 11 years old, and another till the age of 13 years, both having bred with unvarying regularity, and on some years rearing triplets with as much apparent ease, and quite as successfully with regard to the average amount of cash they made, as many other ewes did that had only a single lamb. The flock of breeding ewes numbered 130, mostly long-woolled, of no distinct breed, but useful looking, and of good size, the smaller number, Shropshire Downs, purely bred and strikingly handsome, the whole running with imported Border Leicester rams, this breed outstripping every other in popular esteem in this and many other districts in Ireland. Although largely used with cattle, no concentrated food in the

shape of cake or corn is used with the ewes, a few roots only being daily strewn on the grass for some weeks at that very critical time on all farms, when the old grass is all but exhausted, and the new scarcely forward enough to furnish full subsistence for a heavy stock, the pastures therefore become their principal dependence throughout the year. On few farms in the province of Munster are green crops to be found of ordinary excellence this season, the excessive rainfall of the late summer and whole of the autumn, instead of assisting the roots to make a quick growth, and so enable them to make up for time lost by the drought of spring and early summer, rather retarded growth, by keeping the soil too cold, as evinced by the under leaves of both turnips and mangolds turning prematurely yellow. This farm, although a good one, is no exception to a rule so very general, and roots will be quite scarce enough to require husbanding, an increased difficulty in holding over the usual number of heads being met by laying in an extra quantity of cake. While walking over the field on which the chief portion of the green crop break was situated, I found it level as the surface of a lake; and the day being a teeming wet one, it was evident that the water was not absorbed quickly, in consequence of the soil being previously overcharged with moisture, the result of continuously drenching rain. This retention necessarily caused an unseasonable lowering of temperature, the soil became soured, growth languished, and hence serious injury to a very valuable, and perhaps the most important crop of the entire series. This field, and a considerable stretch of land on the same level, was at no very distant date covered with water, but of late years it has been converted into the finest feeding land in the whole district, through the improving medium of an elaborate system of arterial drainage, conceived by, and executed under the untiring personal superintendence of the late St. John Jeffries, one of Ireland's most distinguished agriculturists. The works were taken in hand at a time when adversity pressed heavily on all classes, landlord, tenant, and labourer being too frequently involved in universal and unavoidable ruin. Large numbers of men were employed on this most useful work, teaching those who were entrusted with the public money a valuable lesson as to its expenditure, if they would but profit by it. This, however, they seldom did, spending the greater portion of it in opening up useless roads, on which there has never been, or is likely to be such an amount of traffic as would warrant their being kept in repair, most of them remaining to this day standing monuments of official absurdity. "Ah!" said an old labourer to me, with whom I happened to get into conversation, "these were, indeed, bad times; men were so plentiful, and work so scarce, that the heartiest man had no chance of getting employment on account of his services being required: he could only go cap in hand and ask to be taken on for 'Godsake.'" Himself and sons were employed on the drainage works, and, at the worst of the famine times, counted it an especial favour if permitted by the manager to fill up drains by moonlight, so as to eke out the scanty wage earned by cutting them at so much a perch. But little trace is now left of that never-to-be-forgotten time, emigration having thinned the ranks of the farm labourers, rendering their scarcity nearly as much a matter of note as was the previous plenty, and those that remain are not only better paid, but their services are in very earnest demand, causing their bearing and manner to be more manly and independent than it was in years gone by. Before leaving the subject of drainage, I may mention a fact which shows that Irish landlords are fully alive to the interests of their tenants, whatever their enemies may say to the contrary. Being informed that the rainfall was not absorbed as quickly as

desirable, the landlord of this farm had men at once set on to clean the mains—more like canals than drains, so great was the breadth and depth—and examine the connections, so as to ensure the perfect and rapid working of the whole system. This operation, although undertaken too late to serve this year's crop, yet was begun as soon as the necessity for it was observed; and certainly remedial measures being taken so quickly, showed a spirit on the part of the proprietor worthy of all praise. The fences on this and several other farms on the same property, are of excellent construction, designed and erected by the gentleman already noticed, the same master-hand being displayed in carrying out the details. The design embraces a threefold purpose, each being obtained in an eminent degree, the occupants of the fields being at once sheltered and secured, and the country beautified. The fields being mostly of extended area, containing from 35 to 45 acres, a shelterly fences became absolutely necessary, more particularly in a country where young stock of every kind have to spend much of their time in the open air during the winter season. The size of the fields permitted the fences to occupy considerable space, and yet be more economical of surface than is customary in the South of Ireland generally, where small enclosures and wide unsightly, and in many cases useless fences, are much too prevalent. Each fence is 22 yards in width, the enclosed space being planted with larch and other quick-growing trees thus securing a great deal of shelter in a very few years. The fence itself is constructed of stones neatly placed on edge, no mortar being used, but kept in position by a strong backing of earth, which is added and firmly packed with a rammer as the building goes on. The earth for this purpose is obtained from the outside of the fence, a trench a few feet wide being dug throughout its entire length, about 12 inches from the foundation of the wall, and when the work is completed the brow is sloped neatly down, the depression of surface adding much to the efficiency of the erection as a fence from stock. When the wall is two and a-half feet high, a line of quicks is introduced, a little fine earth laid on the roots, and the building continued as before, finishing at the height of from three to four feet, according to the physical conformation of the field, whether it adds to, or detracts from, the security of the fence. As the height is reached, a line of tough sods is run along the top of the stones and beaten firmly down, this making an excellent finish, and aiding greatly to keep the stones in position, and prevent their being thrown down by cattle rubbing or people getting over them. The hedge kept nicely trimmed from the earliest stages of its growth adds greatly to the beauty and efficiency of the structure. The utility of such a fence as is now described can scarcely be overrated, sheltering a flock of sheep at its lee side throughout the wildest gale or bitterest snow shower, as comfortably as in a roofed enclosure. During the lambing season the ewes with their offspring range themselves instinctively along the line of shelter, keeping in as straight a line it may be along the very outer edge as if protected by a net or hurdle. So far South, and so close to the Atlantic, at a point where the warm currents of the Gulf Stream exercise an ameliorating influence on its temperature at all seasons, snow seldom lies, being quickly melted, from contact with the warm vapours wafted from the wilderness of waters in the immediate vicinity, this local climatic feature giving the agriculturist one less difficulty to contend with in the management of his stock during winter. Strong gales and heavy drenching rains are, however, extremely prevalent, rendering fences which contribute to the shelter of the live stock of very great importance. Hay-racks, turnip troughs, and all necessary conveniences required in the management of a flock of ewes can be ranged on the sheltered side of the fence, adding vastly to the comfort of the sheep and their at-

tendants, and saving the lives of many lambs each season. Walking over the stackyard, I found it crowded with noble stands of farm produce, the hayricks above everything else being objects of admiration. The only good weeks for haymaking afforded by the entire summer having by great good luck been just hit upon, the quality was of the best, and the clover forced on by the incessant rains added largely to the usual bulk. On drawing out a few handfuls of hay from different parts of several ricks, I found the clover equal in length to the rye grass, a thing seldom seen, and only to be accounted for by the crop being cut later than usual, and the clover thus having time to perfect its growth. The only clover present was alsike, showing that the wet year was favourable to its growth, and giving, I think, a useful hint to growers as to its utility in laying out land with seeds. Straw being a plentiful article, there was no necessity for being sparing of its use, and it was used abundantly wherever it had a chance of being impregnated with the droppings of cattle. This plenty of such a useful article is by no means usual in the South of Ireland, so much of the land being in pasture; indeed, in some districts it is so precious as to be altogether inadmissible as bedding for any kind of stock, sand being used instead. In the markets straw commands as high a price as hay for the greater part of the year. A noble engine of eight-horse power, with powerful thrashing machine of the most approved construction to match, occupied a commodious building recently erected by the landlord in a position that conveniently commanded the whole of the stables, sheds, and feeding stalls in the original quadrangle. The last

of the barley stacks from a field of 42 acres was just being finished thrashing, the grain being weighed and stored in an ample granary. I had thus an opportunity of judging of a crop that is much complained of in the south this year, the constant rain having strengthened the clovers and grasses too much, and made the corn crop very hard to save. I found that the average of the whole field per acre was exactly 18 cwt., a result moderate enough on such land, particularly when conjoined with grain of but moderate quality. The implement house contained a selection of the very newest and best implements, the most prominent being a broad-cast grain-sowing machine, double-furrow plough, Wood's very newest mower, and a tiny-looking reaper, of which its owner gave a very high character for speed, close cutting, and general efficiency.

The leading points of interest in the immediate neighbourhood are the Turkish baths of St. Anne's, the domes and minarets of which were just perceptible in the distance, and the groves, tower, and lakes of Blarney, into the very bosom of which the higher fields of the farm I visited just looked. To this classic spot every visitor to the South of Ireland, whatever his rank, makes a pilgrimage, not considering his tour complete until he has done so. A remarkable feature of late years in the nationality of tourists is the shoals of Americans who every week during the season crowd its shady groves, their first inquiry almost on reaching land being about procuring conveyances for Blarney. Reluctantly I took leave of my kind host and his family, a perfect crowd of little ones accompanying me to the door and waving *adieu*.

FRAMLINGHAM FARMERS' CLUB.

At the last monthly discussion meeting, the subject for discussion, 'Medical Poor Law Relief,' was introduced by Dr. Rogers, the president of the Poor Law Medical Officers' Association, and the president of the Club, Mr. F. S. Corrance, M.P., who was in the chair. The Rev. C. T. Corrance read the following paper, which had been prepared by the President:

At a recent meeting of this Club I told you that I was not satisfied with the present social condition of the labouring classes. I gave you some reasons for this, and among these its pauperism. Of this figures best furnish proof. From the total returns we learn that there was expended for the relief of the poor:

In	£	s.	d.
1842 ...	4,911,498 ...	Price of Wheat ...	6½ 0 qr.
1870 ...	7,644,307 ...	" "	46 2 qr.

Now, what does this represent? So many paupers receiving relief. The report says that 4-7 of the population are paupers under the operation of the test. Now, consider the significance of this fact. Who become paupers? None, let us hope, willingly; of poverty it is the last gulf. What percentage then of the working class does this liability to pauperism embrace? How many are living day by day within its reach? I am afraid to furnish an answer to this, but I recommend it to those who take sanguine views of the state of the working classes. To my mind it discloses an appalling fact. How has this been brought about? Does it arise naturally out of our industrial conditions and the great division of classes into those who have by thrift, or industry, or genius, or strength, accumulated capital, and those who have not done so yet; or is it referrible to successive Acts of unwise legislation introducing into the relations of employer and employed a vicious theory, and practices as corrupt? For the present I pass by the first—a large subject in itself. The second forms the question for to-night. Now I am going to ask you to accept this dogma: That no poor-law can be sound in theory; very few such laws can be applied without mischief; but in

certain societies it becomes a necessity, and the question then is, how to apply it so as to minimise the mischief. Obviously the true direction will be found in prevention. Anything which does not tend to prevent creates dependence, and towards this there is a strong natural bias. I think it is Sir C. Lyell who tells us that if a man be placed upon a boundless prairie without any landmark to guide him, he invariably describes a circle to the left hand, because the muscles of the right are stronger. Depend upon it we shall do so in this matter without a principle of this sort to guide us. Nay, we have done so, and have been constantly moving in circles of this sort. Let this then be our test—prevention. Does this mean repression? The reformers of '34 thought so, and so do some of the same school now who run a-muck against schools, hospitals, and dispensaries sustained by charity or rates. I wonder they don't include gaols and reformatories, which are not self-supported by the rogues. Well then, repression is only a part of our means for prevention, and must not be used indiscriminately; and observe that, as up to this time very few and feeble efforts have been made except in this direction, it is clear we may have a great work before us. First, however, let us see what we have done, and for this it is necessary to go back a little. In former lectures I have spoken of the great Act of Elizabeth, the wisdom of which has not perhaps since been exceeded. At present it will not be necessary to do more than to glance at its practice, in order to contrast it with that which follows. In the first place, it confined the area of relief within narrow limits. It conferred no right to aid beyond the bounds of the parish; that is, within accurate local knowledge. It exacted work from the idle. It utilized charities. It localized the disorder by settlement. It made wise provision for the maintenance of the rights and independence of the poor. And it made every man according to his means contribute. Now, under the conditions of that time each of these provisions were preventive, and they are not provisions which at any time can be lightly disregarded. It is this that I will now undertake to show you by a brief history of the Act of 1834, and its subsequent amend-

ments, taken from authentic Parliamentary papers and official reports. Times changed, and great progress was made. That is, we went round again, and towards the commencement of this century the advance we made was so great, that half the population of every parish were in receipt of relief, and the rates were about 20s. in the pound. It became necessary to put back the Bill of 1834 once more re-established the greater principles of the original Act, though without any adequate recognition of the rights of the poorer class, in the matter of wages, and cottage garden, and allotments, to which I formerly referred. It restored the local Government, it restored parochial settlement. It localised the disorder. It imposed not work, but the workhouse test, and it forbade out-door relief. In its leading principles, suggested by great thinkers, or borrowed from the original Act, it was sound enough, but it was incomplete. It did too little, and it did too much, and it was most unfortunate in its external aspect and demeanour towards an unfortunate class. It was repressive, but not preventive. It was imperfect in its local machinery, and it was unjust in the incidence of the rate. Now, mark the results. For about five years it yielded a partially satisfactory result, and then it began to slake. Now let us see the evidence for this. In the year 1839 there was severe distress among the poorer classes, mainly manufacturing, but also among agricultural classes in the North, and the wheels of the machine began to creak. In the report of the Commissioners in 1840, we find the first warning note. They say: "That in the period elapsed since May 1st, 1839, continued and severe distress existed among the manufacturing population. In Hinchley, Barrow, and Barford, Mansfield, and Nottingham, it became necessary to suspend the regulations against out-door relief." A little later, and the rift had spread, and from agricultural unions there came the same complaint, the order having become general, though discretionary and permissive with Guardians. We find the Commissioners in a subsequent report, speaking thus: "The Commissioners quote as exceptions Market Harborough, Ashby-de-la-Zouch, and some others, where the Guardians were so convinced of its impolicy that the motion to adopt the order was lost." At page 9 of this report a table is given of four counties, viz., Bedfordshire, Kent, Sussex, and Norfolk, bearing a favourable comparison to Devon, Somerset, and some other, in which the order had been introduced. In 1842 things had become so serious that a committee was appointed to investigate the causes at table No. 4 of this report, given as its results, that of all classes there were 236,408 in receipt of out-door relief, and that of this number more than one-third were able to work. In the report of the year following, 1843, we find this remark, "That with respect to the increase of expenditure since '39, we fear that it must be attributed to an increasing laxity in out-door relief." Throughout the succeeding two years the increase was progressive, in spite of all the untiring efforts of the Commissioners. In 1843 we find the number relieved out-doors was increased to 1,108,315, and at page 9 of this report we shall find that even in the law of settlement a certain relaxation took place; and, as a further symptom of a want of intelligent administration, there was a general desire to reduce the salaries given to medical men, and vaccination was laxly carried out (see page 19 and 20 of report). In 1845 the country had returned to a normal state; and the eleventh report of the Commissioners speaks in a sanguine tone of the social state. The Poor Law expenditure for the year having been nearly stationary, a certain note of triumph is set up. At page 5 of this year's report we find a passage of some significance, which ought when we receive similar premature jubilation from official quarters, to cause us to reflect, viz., report page 5, section: "During the early part of this period, particularly during the year 1841, severe distress prevailed in most of the manufacturing districts, including that important part of the country where the manufacture of cotton is carried on. The depression of the manufacturing districts was, as a natural consequence, followed by distress in the agricultural part of the country. In 1844 trade revived, and the number of able-bodied incapable of obtaining employment was not considerable. Owing to this state of things the expenditure of the relief of the poor increased steadily in 1839 and 1843, but diminished in 1844. This fact proves that the amount of the poor rate is not, as some people have feared, governed by a law of constant and irresistible progression, but that, when subjected to proper control, it can be

diminished upon the return of comparative prosperity." The realization of their anticipations affords a measure of the wisdom either of those who made them, or those who have failed to justify them by their subsequent administration of the Act. At page 6, there is evidence that the subject of Local Taxation had begun to exercise an important bearing upon the administration of the relief, and created some discontent. And an Act 7th and 8th Vic., 101, sec. 74, gives its sanction to relaxation of out-door relief to widows *non resident*, an instance of the cautious approach to such things, which it is instructive to note. And there is a passage upon the question of medical attendance and appointments, which indicates something unsatisfactory in this direction (*vide* page 24, sec. 58). Under such circumstances we enter upon 1846. In this year one occurrence only seems to have disturbed the system, or put it under any extraordinary stress. The potato disease broke out. It was chiefly confined, however, to Devonshire and Somerset, and the distress was of a purely local character. It is somewhat remarkable to find that even this partial visitation led once more to a relaxation of the Prohibitory Order in certain unions, on this account. 1847 introduced some new features into the case, for the effect of the 9th and 10th Vic. to prevent removals was beginning to leave its mark. Let us see what was the first experience of this. At p. 8, sec. 16, we find it stated that the Removals Act of last Session has likewise increased the amount of relief to the Irish in the large towns, especially in the Metropolis. The report says: "By the operation of this Act, Irish and Scotch, who have been resident five years in an English parish, become irremovable from that parish; and thus many Irish, who had been resident for that period, became applicants for relief, although previously to the passing of that Act they had been deterred from applying from fear of being passed back to their own country. The expectations of benefit under this Act formed by the resident Irish in the Metropolis appear to have been excessive, and led to their applying in large numbers to several London parishes and unions at the beginning of the winter. Owing to the combined operation of the causes above stated, the pressure upon the poor-rates has been considerably increased since last autumn, and the Poor Law expenditure for the year ending Ladyday, 1847, will, when ascertained, be doubtless proved to have been greater than that for the preceding year." Notwithstanding the indications of these evil effects of such relaxation, and especially its incompatibility with an increasing tendency to out-door relief, no warning seems to have been taken, and another great barrier against national and unlocalised pauperism was broken down, beyond remedy or redress. Nay, even during the succeeding year, further facilities were afforded to abuse, and the following extract from the report of 1848, is most suggestive of what took place. At p. 11, section 39, it says: "The change introduced by the Poor's Removal Act of 1846 produced considerable disturbance in the charges for the relief of the poor in many places, but the temporary Act of 10th and 11th Vic., c. 110, which threw the relief of a certain class of the irremovable poor upon the common fund, removed much of the existing dissatisfaction." A further Act was therefore passed, 11th and 12th Vic., c. 110, making the charge a distinct one upon the common fund. The effect of this is obvious, and coupled with a continually increasing tendency to out-relief, will certainly not disappoint the admirers of a national system of pauperism, and a centralized administration. Still there are signs of trepidation even among official personages, and we find Mr. Lumley, before the Scotch Committee of 1870, speaking in this wise: "With regard to abolishing the law of removal, I am afraid it is a very serious question. I am very much alarmed at it in one sense, viz., that one of the best remaining tests of pauperism would be lost. If there was no power of removing persons who applied for relief, the test for destitution would be very weak indeed. The guardians would have almost to rely upon the vigilance of their relieving officers." And of this, he then supplies a very remarkable instance. But at this date such doubts did not afflict Poor Law reformers, and for some years to come we shall find that things went on in the same direction merrily enough. An increasing feeling against the harsher features of the law became observable, and soon other infringements of the first principles of localising relief were introduced. At p. 12 of this report it is conceded that the right to relief (that is, to live out of other people's work) is not restricted to area, and the Commissioners state, "The law relating to the

relief of the poor confers a right to relief, irrespective of settlement. All destitute persons have a right to be relieved at the cost of the parish in which they are. This right, in the first instance, is absolute." The qualification to this dogma is very slight, and we can scarcely wonder at the rush of Irish into Liverpool, upon such an announcement as this, nor that henceforth vagrancy increased. With this year, also we find an act conferring a grant towards medical relief, amounting to £61,500; and it is curious to find that, concomitantly with this concession, there was a diminution of the expense. Lastly, there occurred a notable change, for, under the 10th and 11th Vic., c. 109, sec. 9, the establishment of the Poor Law Board as a great Government office took place, and the President and Secretary took their seats upon the Treasury Bench. I need not recapitulate the arguments for this step—no doubt they are plausible enough—and that some advantages would accrue was obvious. And to some it may seem, that to throw a doubt upon the principle of Parliamentary responsibility, is to throw a doubt upon Parliamentary Government throughout. I shall risk this, and frankly state my doubts, whether such wisdom as Parliament possessed, was likely to prove an effective support or salutary check, or whether a constant succession of Parliamentary presidents and secretaries would supply in succession, the Cornwell Lewis's, George Nichols, and Edward Heads, of times past; whether so peculiar an institution could be harmlessly subjected to the popular voice, or become a counter in the great political game of ins and outs; whether the corrupting influences of political pressure is an advantage or not; and lastly, whether for the stable administration of the Commissioners, could be substituted a fitful, changeful, unstable authority, dependent upon ministerial tenure of office, remaining merely upon promotion, and chiefly anxious to avoid any administrative reform, which might lead, even temporarily during their ephemeral tenure of office, to an unfavourable balance-sheet. I know not what opinions others have formed—it is seldom that criticism extends to this—but, guided by the facts I am about to narrate, it seems to me that this change in the administration of the Poor Law was followed by deplorable results. It is true that during the following year the new Board could show a favourable return against those which immediately preceded, but it does not say much for the candour of such documents that we find the usual column showing the price of wheat omitted, and that it ranged from 30s. to 40s. per qr. during that remarkable period, which with the immense but transitory impulse given to manufacturing employments by the repeal of the corn duties, will fully account for the trifling reduction manifested. The figures shown were as follows:

1848	.....	£6,180,764	.....
1849	.....	5,792,963	.....	£387,801 decrease.
1850	.....	5,395,022	.....	397,941
1851	.....	4,962,704	.....	432,318
1852	.....	4,597,685	.....	65,019

Decrease in 1852, as compared with 1848, £1,283,078.

It is melancholy to continue the history. During this year, under such favourable circumstances, the Poor Law Board wisely thought it expedient to issue more precise instructions concerning out-relief, which contained provisions of considerable stringency. Art. 1 provides that the relief shall be in kind, in certain definite proportions. Art. 2, that it shall be given or administered weekly. Art. 4 imposes a restriction upon relief to non-residents. Art. 6 enforces the work test, with some others of equal stringency, over which Art. 10 maintains the central supervision. Now it would seem that under the increasing laxity of practice, which had by this time become pretty general, these orders did not find favour with local administration; and on the 14th of December of the same year a circular letter refers to the remonstrances received from many quarters. In this letter the Board vindicates its conduct—referring to the original enactments, 4 and 5 Vic., c. 76, ss. 15 and 52; but, upon consideration, it consents to rescind Articles 1, 2, and 10 of that order, betraying the weakness of popular administration by the surrender of nearly all these important safeguards, while it condemns its own action by cogent arguments and conclusive reasoning. Clearly the effect of the political association is becoming apparent. With this, more amendments of the Law were associated. The 15 and 16th Vic., c. 14, continued the operation of the several Acts, which rendered the irremovable poor in Unions a charge upon the

common fund, for another year, and c. 18 continued the exemption of stock-in-trade from rateability to the poor for the same period. In 1853, the expenditure is once more increasing, but the cause is the increasing price of provisions. Wheat is 42s., increased expenditure £41,379. 1854 tells the tale more clearly. Wheat goes up to 61s. 9d., and £343,789 is added to expenditure. In this instance the report of the year does not forget the column, and it is duly noticed as a reason for the augmented charges. These are the tricks of the trade, and they may be passed by as such; we must, however, look beyond them for the real causes, which tell their tale in a progressive and steady rate of increase. And now, having arrived at this point, time warns me that I must pass more rapidly onwards through the history of the past. In the succeeding year under this form of administration we shall find, with occasional reactions and interruptions, a constantly retrograde tendency towards out-door-relief, accompanied with facilities which formed no part of the original Act. After this, 24th and 25th Vic., 1861, c. 55, shortening the term to three years; and subsequently 28th and 29th Vic., 1865, c. 8, which once reduced the term to one year. Concomitantly with this was widened the area of relief under successive acts, by 10th and 11th Vic., c. 110; 11th and 12th Vic., caps. 110, 111; 12th and 13th Vic., c. 103 s. 16; and 22 Vic., c. 29. By the 24 and 25 Vic., the period of three years was substituted for that of five, specified in 9th and 10th Vic.; and residence of any person in any part of the union has the same effect in reference to the provisions of the said section as residence in the parish. By 25th and 29th Vic., s. 17, one year was substituted for three, and the quoted figures will tell the rest. It is a tale of continuous increase from that point, viz., total amount expended to relief:

1855	.....	£5,890,041	.....	897,686
1856	.....	6,004,244	.....	917,084
1857	.....	5,898,756	.....	855,010
1858	.....	5,878,542	.....	908,886
1859	.....	5,558,689	.....	865,446
1860	.....	5,454,964	.....	844,633
1861	.....	5,778,943	.....	883,921
1862	.....	6,017,525	.....	917,142
1863	.....	6,527,036	.....	1,079,383
1864	.....	6,423,383	.....	1,014,978
1865	.....	6,264,961	.....	951,899
1866	.....	6,439,517	.....	916,152
1867	.....	6,959,841	.....	931,546
1868	.....	7,498,061	.....	992,640
1869	.....	7,673,100	.....	1,018,140
1870	.....	7,644,307	.....	1,032,800
1871	.....		.....	1,037,360

} Mean number of all classes at one time in receipt of relief.

Now during the greater period of this time this process went on either unobserved, or as a thing accounted for by the law of natural increase. It was scarcely a matter of sufficiently political importance to occupy the House. The great aggregation of such pauperism in the larger towns changed this, and in the metropolis it began to be recognised as a formidable fact. Towards the end of the last decade there were passed several important Acts, and the formation of district schools, asylums, and dispensaries for the Metropolis marks an increasing sense of requirements of a higher class. These, however, are local in their character, and partial in their effects, and must obviously be followed by measures of a more general and comprehensive sort, if they are to be attended with any beneficial results. We have nationalised pauperism, and we must deal with it as a national evil, deeply rooted, and widely spread. To some the possibility of this may be a matter of doubt, unless we are prepared simply to retrace our steps. It would be difficult, perhaps impossible, to do this, and in this case the alternative is clear—we must raise our organization to the level of its greater task, and make use of means, hitherto greatly neglected, towards its accomplishment. Emphatically I say, then, that one such of a value unsuspected is an efficient system of medical relief. Nor does this rest upon theory only, luckily it is capable of proof, and for an example of its operation we are able to turn to the history of Irish Poor Relief. I bid you mark the contrast. The Irish Poor Relief Act was passed on the 31st July, 1838, upon principles not greatly differing from that of the English Act of 1834, save in one important particular, which I would beg you to note, viz., the especial care which from the first seems to

have been bestowed upon its medical relief. Two causes, no doubt, tended to this. One, the great prevalence of fever in that country; and the other, some existing enactments, to which I shall presently advert. From that date up to 1844 there was little real experience of the working of the Act. At this time 98 Unions seem to have been formed—out of the 100 originally projected—and the houses rebuilt. At this time the first difficulties experienced seem to have cropped up. They arose upon the question of rates. In 21 Unions it was necessary to employ the police and military to collect the rate. Changes in the law took place, and in certain cases the owners were made the persons chargeable to rates—6 and 7 Vic., c. 92. The cost of establishment charges in Ireland, compared with England, is a striking feature in the case, as well as the far more complete organization of the Unions for in-door relief. The attention of the Commissioners in that country seems to have been called at an early period to the question of medical relief, and we find them anxious to enlist in the services of the Poor Laws, the valuable organizations which they found already at work. In 1805 we find that County Infirmaries had been set up, under 45 Geo. III., c. 3, and following upon this, in 1818, Fever Hospitals were established upon the county rates. In 1836 the Commissioners report that there were 31 County Infirmaries, and five City and Town, receiving aid from Government. Nevertheless, up to the date 1844, the system was not in close relation to poor relief. Under these circumstances the Irish Act started upon its course. Now, in the former instance I have given, I have spoken of the strain to which the English system was exposed through a period of depression to the working class; and I have traced its decadence from that point. It never wholly recovered from the laxity of principle then partially introduced. Let us see whether this applied to the present case. In 1846 the potato crop failed, and the distress then caused was neither partial nor temporary. It was a famine in its character, and a famine in extent; and it was in such a country that the law made property liable for the support of the poorer class. The collapse of the in-door test was complete, and the system became one of universal and gigantic out-door relief, under which three millions of persons were fed at their own homes at an expense of £1,557,212. During the succeeding years, up to 1848, fever and disease followed close upon the wake of this, and once more the system was exposed to the severest test. And now was found the great value of the organized medical force. To aid the County establishments the 10th and 11th of Victoria was passed, and practically the commencement of the Irish system of medical relief was set up. Upwards of 300 hospitals and dispensaries were provided under this Act, with accommodation for 23,000 patients. The expense was £119,055, which came out of rates. The weekly mortality increased from 4 in 1,000 in October, 1846, to 13 in January, 1847, 20 in February, 25 in April. So terrible a conflict between science and death scarcely ever took place, but it rose above the crisis at last. Nor was the lesson forgot, and its results were the permanent establishment of the dispensary system, under a Parliamentary Act, called the Medical Charities Act, 1851. And now comes the crucial test. Under what state do we find the Irish system, after so terrible an ordeal as this. The answer must be unanswerable figures:

	£	£
In 1852 there was expended	517,455 in-relief,	4,917 out-relief.
" 1853	6,030	4,920
" 1854	463,858	3,715
" 1855	432,824	4,702
" 1856	358,943	2,245
" 1857	292,085	2,412

Once more, take these figures as the proof: In England, in the year 1870, there were relieved of all classes, 156,800 in-door, and 876,000 out-door; or a total of 1,032,800, at an expense of £7,644,309, out of a population of 21,950,000. In Ireland, for the same year, the number relieved there were 230,429 in-doors, and 53,885 out; at an expense, including medical charities, of £798,138, out of a population of 5,516,674. The amount in the £ respectively being 1s. 2³/₄d. in Ireland against 1s. 5-9d. in England and Wales. No less remarkable are the statistics of diseases and death arising from zymotic complaints, a subject which Dr. Rogers will more properly deal with, together with a comparison of the relative

sums expended upon medical assistance, with which the comparison is complete. What conclusion shall we then draw from this? First, I think that the value of this great preventive service has never been fully recognized as yet. In this country it has been treated with absolute neglect, and what is the result? Let the 22nd report of the various classes of paupers, 1869-70, tell the tale of this, viz., at p. xviii., of adult able-bodied paupers, it speaks thus: "The whole of that large proportion of the pauperism of the country which is caused by temporary sickness is included in this class. If the sick pauper be the male head of a family, the whole family dependent upon him are included in this class." This number, in the returns for London, are given at 31.0 per cent. of the whole list, and for the whole country at about 30 per cent. What especial features do these two instances present. In the first we cannot fail to see that there has been a great and progressive deterioration from the original intentions of the Act, and that in this case each departure from principle was simply a prelude to the next. In the second we trace a situation almost precisely analogous, a strain of far greater intensity, a temporary but universal collapse, followed by a quick but permanent recovery, and a complete vindication of the principles upon which the Act was based. Why was this? Shall we be forcing the conclusion if we say that it was greatly due to the one exceptional advantage it possessed, namely, that of well-organised medical relief? One thing is sure, the value of this great preventive service has never in this country been fully recognised as yet, and this, too, against evidence of the clearest sort. In a recent speech, Sir Baldwin Leighton says, referring to the success of the Aetham Union, "Sanitary measures had much to do with the reduction of pauperism. Everything was done to prevent or stop epidemic diseases, and the bearing of this was that medical relief was more than half of out-relief." Mr. Atkins, vice-chairman of the Hackney Union, also said, "That the great reduction in the rates of that parish might be attributed to the increase of the number of relieving officers from two to eight; that whereas formerly they had one medical officer whose district was ten miles round at a salary of £65, they had now eight officers at salaries of £80. In 1867 they had 6,000 paupers; in half-a-year after the number went up to 16,000, the Union Chargeability Act having come into force." Now, what is the present state of our medical service? Dr. Rogers will be able to give you some instructive particulars on this point. Not only is it neglected and inefficient, but it has become a great and increasing abuse. Turn to the annual report of this year and see what is said, Mr. Peel, at p. 181, speaks of the diversity of practice and inefficiency of salaries to provide medicine, and recommends the establishment of dispensaries. Mr. Farnall's report, after stating that nearly 50 per cent. of the out-relief is given under so-called doctor's orders, says that a diversity of such treatment is simply at the discretion of the different medical men; that the supply of medicines is insufficient and bad, and he comes to the remarkable conclusion that it would be a pity to disturb so delightful a state of things. Mr. Cane is less insensible to the logic of his own report, and sums up the existing state of things thus: "The doctor's orders for meat and wine in effect transfer a large portion of out-door relief from responsible to irresponsible hands. They afford a minimum benefit at a maximum cost, afford constant opportunities for evading regulations directed against the grossest abuses—the relief in aid of wages—and hold out a strong and direct temptation to corrupt practices for private advantage." No words could convey a stronger condemnation than this of a miserable system, founded on inadequate remuneration, bad medicines extended to irregular districts and areas, and practices utterly incompatible with the working of the Act. Surely, then, we must either do away with altogether, or radically reform this service under the Act. Of that reform I will presently speak. First let me draw some conclusions from this review of the Poor Law since 1835. I think it will be seen that the strictures I first expressed are borne out, and that both in principle and practice we have widely departed from the original Act. Let me summarise the progressive steps. First, we allowed the gradual introduction of a general system of out-door relief. Then we de-localised relief under Removal Acts; next we weakened control and supervision by common funds and union rates—measures in themselves admissible under certain circumstances, but absolutely fatal to the operation of a Poor Law wholly dependent upon a repres-

sive test—local supervision and local taxation of a partial class. No doubt it was under a sense of the undue hardship of the Act upon the labouring classes that these amendments of the law took place, and something perhaps of the necessity imposed by the political association of which I spoke; but still more, I am inclined to think, from the neglect of remedies more efficacious, more humane, and under the circumstances more just, which deprived the administrators of the law of the moral support of those who saw the suffering, and recognized an unsupplied and often undeserved want. The theory of this law was repression, but the possibility of its enforcement depended upon conditions which its authors took no pains to find out—industrial conditions, social conditions, educational conditions. They cared nothing that the labouring classes possessed neither education, nor provident societies, nor medical clubs; that all the old enactments of Elizabeth to set apart waste lands, and to build cottages, had been set at naught; that the poor possessed no property beyond their hands, their daily work, and their daily wages—precarious enough, and in their uncertain tenure of such things, there could be but small inducement, even if the means existed, to save. For this helpless multitude it had nothing better to offer than the workhouse test. It assisted no providence, it instituted no industrial training, it starved its medical relief. What wonder that, deprived of sympathy, it was driven foot by foot into practices against which it was intended to protest. And now, gentlemen, comes the question, how are we to apply our remedies to this? In the instances I have mentioned we cannot go back; neither political nor social circumstances will permit us to do this. We have nationalized pauperism, and we have centralized administration, and let us boldly admit it. Upon these lines we must go forward, not back. Well, but some may say, how, and to what end? My answer must be: In making these changes in the law, we must become conscious that we have undertaken a great task. Superior organization can alone overtake and accomplish this. By this means alone we can restore a good deal which we have lost. The local information and knowledge possessed under the parochial system we must supply by paid officers thoroughly instructed in their duty, and competent to carry it out; and mind, I say a good deal when I say this. The liability for a fluctuating, unsettled population, must be met by a distinction in the application of out-door relief, guided by the circumstances of each case. To none, or few persons settled within the term of the original Act, should it be extended in any case. The administration of a common fund presents peculiar dangers, and temptations to abuse of a very grave sort. The discharge of workmen during unproductive seasons, rates in aid of wages, lax supervision, are not the least. It seems to me indeed scarcely compatible with out-door relief, and to entail upon us establishments of a different class—the Irish system in fact. We must thoroughly reorganize our medical relief system throughout, establish dispensaries, districts, sanitary and medical; and above all take care that the functions of the medical officers are precise and exact. His duty is medical. To the Dispensary Committee and the Board of Guardians belong the duty of relief. For persons too pauperized to afford themselves the necessary food, the infirmary within the house is the proper place. But also I call organized charity into this field as their proper place. Under the Dispensary Committee, their gift will seldom fall short or be misplaced. Education and industrial training require systematic efforts, not put forth as yet; and I shall call upon Dr. Rogers to satisfy you of the power of that scientific arm which we so strangely neglect. And lastly, in view of the great shortcomings of a highly centralized department—its incapacity to originate; its obstructive policy; its unwillingness to contribute from imperial sources; its subservience to political influence, and the obvious impossibility of strong government, in matters requiring the utmost tact and firmness and judgment—I am obliged to come to the conclusion that, here we are in need of an intermediate authority which would extend to common areas of administration and taxation. A county or its division, or one of our large boroughs would represent such a one. Through such an organisation the general system of relief throughout a district could be assimilated, while the general fund raised as a county or borough rate would be applicable to district schools, sanitary and medical inspections, and other general purposes, at present greatly beyond the scope of Union

administration. By such means we might, perhaps, attain a control over an evil, at all times great and menacing to society, but at present rendered doubly so, by its dangerous aggregation into our larger cities, and under ill-advised relaxations in the conditions of relief, which has assumed a truly national character. For this, I think, our remedy must be, more efficient and highly-organised local administration in every department, in which personal sympathy and well-directed charity will play their part.

Dr. J. ROGERS, President of the Poor Law Medical Officers' Association, who traced the history of the Poor Laws from the Commission in 1832-3, had been informed by two members of that Commission, Sir J. Kay Shuttleworth and Mr. C. P. Villiers, that although that Commission examined every conceivable cause bearing on the growth of pauperism, the sickness of the poor, as an element in its production, was not inquired into; in fact, its importance was entirely overlooked. It could not, therefore, be wondered at that the Poor Law Commissioners on the one hand, and the local Boards on the other, in making their arrangements for the relief of such sickness, should have adopted that course which appeared to them to be most economical—fixing the stipends of the medical officers at the lowest amount, and then advertising the appointments as open to all comers. Dr. Rogers traced the effect of this in the inefficient character of the medical relief afforded to the poor, and pointed out the evils that had resulted from it in the increase of pauperism. Dr. G. Wallis, who wrote 30 years ago, put the amount of pauperism amongst the working classes, which was traceable to sickness at 72 per cent.; Mr. Gathorne Hardy, in introducing the Metropolitan Amendment Act, at 50 per cent. His (Dr. Rogers') own inquiries led him to believe that Dr. Wallis's estimate was the nearest the truth. That it was very considerable was shown by the last report of the Poor Law Board, from which it appeared that from a total of 1,085,000 paupers, 4 per cent. only were adult males destitute from want of work, and that 30 per cent. of the in-door, and 13 per cent. of the out-door, were absolutely on the medical officers' books, these being wholly irrespective of the families dependent on them. Besides these there were vast numbers of people disabled by age or special infirmities, and of children, many being orphans. Passing to the stipends of the medical officers, he stated that they were fixed on no principle whatever; thus they varied from 8d. to 7s. in a case of sickness, the largest proportion, however, being below 3s., and that from an analysis of the expenditure on drugs for 60 metropolitan medical charities, it had been found that the average cost, of medicines only, amounted to 2s. 5½d. per case of sickness. It was therefore obvious that many of the pauper sick either went without medicine, or if they were prescribed for as they should be, it could only be at a pecuniary loss to the parish doctor. Passing to another point, equally important, if sufficient visits, and consequently proper attention, was paid to the sick, he found there was a general order of the Poor Law Board limiting the area of a district to 15,000 acres, and the population to 15,000 persons, and that as regards the area there were no less than 665 districts which exceeded 15,000 acres, and of this number 31 were above 30,000, 11 above 40,000, 12 above 50,000, 8 above 60,000, and 11 above 70,000; and in reference to population, there were 205 districts above 15,000 persons. Of this number, 15 exceed 30,000, 9 40,000, and even more than this. Similarly, there was an understanding that one district only should be held by a medical officer, but in reality there were 627 districts, which were held by 291 medical officers, whilst 266 medical officers nominally attended from 1,000 to 10,000 cases of disease annually; in fact, the Poor Law Board had never seriously attempted to interfere with local medical relief arrangements, though it must be evident that it had been reduced in such large districts and populations to a mockery. In fact, the principle had been that when a man was badly paid with one district of 15,000 acres, they gave him another, in order to enable him to keep a horse. Practical gentlemen, such as he saw around him, knew what ten, twenty, thirty, or forty thousand acres meant. He would ask them was it possible that a poor man, with a fever such as that which the Prince of Wales had, and which engaged the attention of three medical men, could be attended to by a medical man with such a district? Yet there were amongst the labouring classes scores of such cases. Dr. Rogers then spoke of the Irish system of Poor Law

medical relief. Some of those present could remember the horror that passed over the land when the terrible famine and fever took place in that country in 1848. Up to 1851 the system of medical relief in Ireland had been most unsatisfactory. In the fever of which he spoke the medical officers were swept away, and it became incumbent on the Government to adopt some system. He had yet to learn who they were that suggested the Act of Parliament, but the time would come when they would have all the merit of their sagacity and forethought. An Act was passed in 1851-52 called the Medical Charities' Act, for Ireland. By that Act the whole country was divided into dispensary districts, 719 in number, with 1,015 stations, some districts having two or more stations. At that date the total outlay for the poor in Ireland was £1,199,678, or 1s. 7d. in the pound, of which £54,289 was spent in medical relief. At the end of seven years the gross relief had fallen to £133,614, or 8½d. in the pound, medical relief having increased to nearly £100,000. Medical relief in Ireland did not make the recipient a pauper; and the result was that whilst in England there were 784,906 out-door poor and 157,749 in-door, there were only 50,257 out-door to 288,953 in-door poor in Ireland, the rate per head for out-door poor in England being £4 5s. per annum; in Ireland less than £1; in-door poor, England, £9 11s. 8d.; Ireland, £2 10s. 8d. In England the medical officers were compelled, by the poverty of their resources, to send many of the sick poor into the workhouses, thus converting those places into huge hospitals. The result of the working of the two systems was shown by the contrast of the Irish with English towns. In Belfast, where the population was 144,629—eighteen medical officers; cost of drugs, £1,508 6s. 3d.; salaries of medical officers, £2,397; gross relief, £25,009, with the conterminous Unions of Newcastle and Gateshead, where the population was 170,377—medical officers, 15; salaries, £1,212 (out of which they had to find drugs); gross expenditure, £60,500; also Cork—population, 147,572; twenty-two medical officers; drugs, £1,407 1s. 4d.; stipends of medical officers, £2,450; gross relief, £35,816, with Bristol and Clifton—160,714; medical officers eleven; salaries, £1,210; gross relief, £70,414. As to the rural Unions, he took Thomastown, in Kilkenny. Its population was 21,000; it spent £92 in drugs; £650 for salaries of medical officers; and £3,800 was the amount of the gross relief. Contrast that with Risbridge, in their own county. There the population was 17,000; nothing was spent for drugs; £374 was paid for salaries of medical officers, but this was made up by paying £10,000 in gross relief; or, just three times as much as in Thomastown. Again, contrast Lismore, in Tipperary, with Woodbridge. The population of Lismore was 20,000; its area, 97,000 acres; the cost of drugs, £111; salaries of medical officers, £795; gross relief, £3,600. The Woodbridge Union had 22,000 inhabitants; was 82,000 acres in area; nothing was spent for drugs; £549, salaries of medical officers; but the gross relief amounted to £10,000, or, just three times as much again as the Irish Union. Taking the population of England and Wales at 22,000,000 the cost of medical relief was £282,000; gross relief, £7,673,000; Scotland—population, 3,200,000; medical relief, £33,786; gross relief, £931,274; Ireland—population, 5,500,000; medical relief, £133,900; gross relief, £817,772—being for gross relief 6s. 11½d. per head in England, 6s. 0¾d. in Scotland, and 2s. 11¾d. in Ireland; and that medical relief constituted the twenty-seventh part of the gross outlay in England and Wales, and in Scotland, and one-sixth part in Ireland. Having ascertained so much from the Poor Law returns, he thought he would try it another way. He asked Mr. W. H. Smith, the member for Westminster, to get a certain return. If he had asked the Poor Law Board for that return, he would have been told that it could not be had. He asked for the estimated population of England, Wales, Scotland, and Ireland, the gross mortality in a series of years, and the mortality from preventable diseases. He dared say the clerks did not understand what it was wanted for; but it brought out the fact that while 1 in 43 of the population died yearly in England, 1 in 44 in Scotland, only 1 in 60 died in Ireland, and whilst zymotic or preventable deaths in England constituted one-fourth of the total mortality, and 1 in 190 of the population; Scotland one-fourth, and 1 in 194 of the population; in Ireland it was but one-fifth of the total mortality, and 1 in 308 of the population, and that the correspondence of general and zymotic mortality in Eng-

land and Scotland was evidently due to the same cause—deficient medical relief. They would observe that England and Scotland with equally faulty medical arrangements had a corresponding death rate, and that Ireland, which had an admirable system, had not only a lower death rate, but—what to the British ratepayer was perhaps of equal importance—a lower rate. This was not always the case. Up to 1852, fever was the opprobrium of the islands. Those who were old enough to remember the time when Irish labourers came to this country for harvest work, could remember that there was always a constant dread of their infecting a neighbourhood with fever. But all that had passed away, and why? Because of the wise provisions suggested by the wise heads of those who carried the Medical Charities Act through the House of Commons. But there was another point to which he wished to draw attention. Not only had fever been diminished, and diminished in such a remarkable degree that it had ceased to be the opprobrium of Ireland, but small-pox had also been so diminished that in the year before last there were only 20 cases in the whole five millions of Ireland. Small-pox did not produce one-fifth of the cases produced in England and Wales, because they had an efficient body of Irish Commissioners, who thought it their duty to look up cases of vaccination. The result had been a great diminution of that scourge of humanity. To show the importance of this matter he would tell them that there were 4,500,000 of the population of the labouring classes, and it was amongst them that the epidemic disease took its rise, and from them spread to other classes; it was amongst that class too that they had to look for their labourers, and whose children they had to keep during sickness and to keep till they grew up, if the head of the family died. It must therefore be obvious to them how important was the question of the sanitary condition of that class. He thought he had proved the necessity for an alteration, and that the suggestions he had to make should be carried out. Their excellent representative, Mr. Corrance, had taken a great deal of trouble, and had shown more than ordinary zeal with reference to the Association that he (Dr. Rogers) was connected with; and he was about to introduce in the House of Commons a scheme framed after the Irish Medical Charities Act. If that scheme should be carried into effect, he need not tell them that it would cause some additional outlay. He calculated this at £310,884 on medical officers' salaries; £128,000 for drugs and appliances, such as trusses; and £94,000 for the rent of dispensary buildings. The total of these amounts would reach to about £532,000, or an addition to what was now being paid of about £250,000. But if he had proved anything, he had proved that additional outlay for medical relief would be speedily recouped by a diminution of sickness, a diminution of the death-rate, and of other causes which produce pauperism. Dr. Rogers expressed his himself in favour of the removal of the burden from the rate-payers to the Consolidated Fund. He had long held that the rates for the relief of the poor should not be thrown upon a portion of the community. This was more especially true of sanitary measures, and for the following reasons, which he had tabulated, he held that the entire cost of medical relief should be thrown on the consolidated fund: 1. Because the incidence of local taxation was unequal and limited. 2. Because the character of modern pauperism was migratory, and had nearly ceased to be parochial. 3. Because sickness cannot be localised; for these epidemics which strike first and hardest the poorer classes, extend from them to those above them in the social scale, and were also liable to, and did spread over large tracts of country. 4. Because such epidemics, when occurring among the poor, were entitled to at least as much consideration as when occurring among cattle—and the ravages of cattle plague had been met by a rate thrown over a whole county—especially as the health of the poor, and their preservation from such epidemic outbreaks, was a subject in which the whole community was vitally interested. 5. Because illness among the poor in one part of the country required the same skill and outlay on medicines, to treat it successfully as in another. 6. Because the principle having been conceded of part payment from the Consolidated Fund, no valid objection could be advanced why the whole should not be thus paid. 7. Because local and often prejudiced opposition to necessary expenditure would be determined if the whole community contributed equally, upon a basis settled by some central authority. He concluded by saying that he had come down at the invitation of their worthy members to place his views before them. He hoped he had

made them sufficiently plain and had given them a sufficient outline to enable them to sit in judgment upon what he had said. If as the result of their examination they came to the conclusion that he was right, he hoped they would assist their hon. member in carrying out the scheme which it was his intention to introduce.

Mr. GOODWYN GOODWYN was not personally in a position to say whether the argument of Dr. Rogers was a good one, but the evidence he had brought was strong, and convinced him that there was a great deal in it. If they found nothing to say against it, they had best try to get the Irish system established.

Mr. JONES said his experience as a medical officer in the district was exceedingly slight, and he scarcely liked to give it. He could only express his entire concurrence with much of what Dr. Rogers had said, and hoped they might, with the assistance of their member, get something done. His district extended six miles straight out in one direction, and he was one of those fortunate, or unfortunate, people who had two. His second district extended five or six miles in another direction. For one of these, with five parishes, he had a salary of £65; in the other there were two parishes, and he had the munificent sum of £15 lss. for that.

The PRESIDENT: And find your own drugs?

Mr. JONES: And find my own drugs which I believe is generally the case throughout England. I am not saying this by way of complaint, but I am simply endeavouring to support what Dr. Rogers has advanced.

The PRESIDENT said he had mentioned one great abuse, the medical orders for meat and wine. He should like to have a practical opinion on that point. Would any guardian give an opinion as to the medical officers dispensing meat and wine, which had become a very common practice?

Mr. JONES said it was not the custom in his experience, for the medical officers to send the orders for meat and wine, but it was for meat. There was a printed form with a blank, and it was not the custom for guardians to give meat to a pauper, except by special recommendation of a medical man. When a man was ill, he would require something more than eighteen-pence a week, and a stone of flour. How was he to get anything in the shape of broth without meat being granted? They would of course say that was improper.

The PRESIDENT: I don't say that.

Mr. JONES said he was glad to find Mr. Corrance said it was not so. He had understood him to condemn the giving meat. He thought they ought only to find fault with the practice when the orders were given rather too freely.

The PRESIDENT said he had pointed out that the practice was liable to great abuse, and that such cases might best be met by charitable organisation. That would be far better than the indiscriminate way in which people now gave relief. That morning he had been asked to subscribe to a fund for the payment of a doctor's bill of £9 for a poor man. He asked if the man had belonged to a provident society and other questions, but he could get no satisfactory answers, and so declined to put his name to the paper. He should not object to subscribe to a charitable fund, and his intention was that people should go to such an organisation for medical relief.

Mr. JONES: You mean that a medical man should have a form placed in his hands, and give it to the man, and send him to the society?

The PRESIDENT: To the Dispensary Committee, and that Committee should furnish the order for meat and wine.

Mr. JONES: Then the difference would be that it would not come out of the rates?

The PRESIDENT: At any rate the rates should be supplemented from other sources. The sick man should go into the Infirmary or the House. My proposition would be the Infirmary or the House for such cases, in order to check abuse. The President, in reply to further questions from Mr. Jones, said he would have all cases of sickness removed to the Infirmary, if possible. He would relieve the doctor of the responsibility, and did not think he was the proper person to act as a relieving officer.

Mr. JEAFFRESON said it struck him that the medical officers were well qualified to supplement the relieving officers. They saw so much more of the cases than the relieving officers did. They wanted to leave rather more in the hands of the medical

officers. The statistics of Dr. Rogers were rather strong. He did not want to prove so much, and his case would have been better if he had not proved so much. He thought, too, that the difference in the character of the population had not been sufficiently shown. Half the advantage of the Irish system arose in his opinion from the more frequent visits of the doctor, which were a check upon abuses.

Dr. ROGERS said the figures were not of his own making. He had taken Belfast, a large manufacturing town in the north of Ireland, and had contrasted it with the towns of Gateshead and Newcastle; the city of Cork, again, with Bristol. In the latter, Dr. Budd had informed him, there actually had existed in 1856 a dispensary system, similar to that in Ireland. The Guardians of that day, in their penny-wise and pound-foolish system, thought that by diminishing medical relief the expenditure might be cut down and pauperism reduced. They therefore got rid of the dispensaries, and abolished the system of supplying drugs, and appointed three medical officers to look after the poor, at salaries £12 in advance of what it had cost them to supply drugs. In ten years the total cost of relieving the poor had gone up from £27,000 to £37,000, the population in the meantime remaining stationary. As to the difference in the character of the population in England and Ireland in the rural Unions, he did not think it very great. There was not a great difference between Suffolk and some parts of Ireland. Dr. Rogers also quoted the statement of Sir Baldwin Leighton, the chairman of the Ateham Union, that the great thing to be relied upon to keep down the rates was to look after the health of the poor. The expenditure of the Ateham Union had been cut down by that means. The Union was about equal to the Plumsgate, where the total expenditure was £8,500, but at Ateham it was only £4,300 a-year.

Mr. D. SMITH, jun., spoke warmly against the system of giving the sick-poor meat and wine. He felt, from his experience as a guardian for many years, that a better system of medical relief was greatly needed. The medical officers' orders for porter, beef, and mutton were what swelled the rates.

Mr. JEAFFRESON said, a great thing to prevent the necessity for such orders would be to pay the labourers 5s. more per week in wages.

The PRESIDENT, in summing up the debate, pointed out that the principles of the Poor-laws of 1834 had been departed from, and they must have something else in their place. They could not now go back to parish management and parochial chargeability. A better organization was needed, and one that Dr. Rogers had pointed out was a valuable one, but only one. But there was this difference between Ireland and England. Not only was the Irish system one of medical relief, but it was also one of in-door relief. But it was simply impossible to establish a system of purely in-door relief in this country. They must make up their minds to supply a poor man's most pressing wants, and Dr. Rogers told them that the most pressing want was in sickness. If a man could not get relief at that time he was disabled for life. Therefore, objectionable as most forms of relief were, they must have medical relief. It was one of the subjects where they would least expect abuse, as people did not like black doses, and it was hardly to be conceived that a man should sham illness to obtain only physic and to avoid work. They needed organized charity, and to make the dispensary system the beginning of an alteration of the Poor-laws. Out-door relief must be done away with in every case where it became abused, but in those cases where it could not be abused they must provide an adequate amount of out-door relief. The Poor-laws were open to great changes—probably great improvements—and he thought Dr. Rogers had proved to them that there was one such improvement that might be fairly sought.

Mr. GOODWYN-GOODWYN proposed a vote of thanks to Dr. Rogers.

Dr. ROGERS, in reply, said he had been engaged for ten or twelve years in the work of showing people that on the question of medical relief depended a large amount of pauperism. He had at first appealed to the benevolent men, but he found that in this country they were a feeble minority. Since that he had gone on another track—to the breeches pocket—and since that he had got no end of disciples. He believed, too, that the feeling was now rising in his favour, and he should soon get a great many more.

SHROPSHIRE CHAMBER OF AGRICULTURE.

LOCAL TAXATION.

At a meeting at Ellesmere, Mr. BOWEN JONES, vice-president of the Chamber in the chair, remarked that they had already had that subject before the Chamber on two occasions, and it had several times been referred to by speakers at the annual dinner and at their committee meetings. As they had been criticised by the press for bringing that question forward again, he thought it would be well to observe that there were good reasons why it now should not be lost sight of. The question had been fully discussed at Newport, where it was very ably introduced by Mr. Jasper More, on which occasion that gentleman called particular attention to the history, character, and incidence of the rates. And they discussed the question at Wellington last year, when the Rev. C. F. C. Pigott, their staunch champion on that subject, opened the debate. Still, there were good reasons why they should re-consider the question on the present occasion. On the previous occasions when they had discussed the question it was in its infancy; but now they had arrived at certain conclusions, and had enforced their views pretty freely upon the Government of the country. Last session they had two bills brought before them, but they did not meet their views as they ought to have done. It showed, however, that they had made an impression upon "the powers that be." They had the nail partly through the door, and he thought they ought to go on until they had driven it through and clenched it on the other side. He thought there were reasons why they should again open the question, and discuss it thoroughly. He would now call upon Sir Baldwin to open the subject; and he might say that they owed Sir Baldwin a debt of gratitude for coming down from London to attend that meeting.

Sir BALDWIN LEIGHTON said: At the request of a meeting of this Chamber, I have consented to attempt to introduce the subject of local taxation at this meeting—with some diffidence not only on account of the importance of the subject, and the presence here of men who have given more time to the question than I have, but still more because I am persuaded that the time has now arrived when the country party, the ratepayers, and those who agitate this question, must put forward a distinct demand—some counter proposition to Mr. Goschen's. We must show, too, that this is no mere matter of interest or class, not a mere breeches-pocket question, but a great matter of home policy, the unjust slacking of a great industry, that Government must attend to, or make way for those who will. We must show them that we can coin politics, as well as manufacture beef and corn. That is the responsibility that we must now assume. Now what is the position of this question? After some years' ventilation of the subject the long-suffering ratepayer has at length had his eyes opened to this state of things, which I cannot better describe than in the words of the Local Taxation Committee of the Central Chamber, signed Sir Massey Lopes. It says: "The tendency of legislation has hitherto been to throw upon the ratepayers various new charges for objects which, however good in themselves, have more a national than a local character. Chancellors of Exchequer have thus been enabled to take credit for budgets which by no means represent the actual taxation of the country, but by relieving imperial at the expense of local taxation give a very delusive impression of the actual amount of our national imposts." I don't think anyone can dispute those words; the thing has gone on till the burden of it has become intolerable, and the ratepayers have, through their representatives, at length said: "What charges are fair and just we are willing to pay, but what are unjust and national, we, a mere section of the nation, will not submit to; and meanwhile no more burdens, no more new taxes, till you have settled this matter for us." It was that determined position taken up by the ratepayers of this country that compelled our unwilling Government, after putting of the question for two years—remember they baffled us for two years with alternate threats and promises—compelled our unwilling and antagonistic Government to bring in a bill last year, in-

adequate in its scope and a mere juggle in some of its provisions, but a bill that did actually acknowledge the injustice by an offer of a sum of £1,000,000 a year—remember that sum—over 1,000,000 a year in the house tax. Thirty years ago Sir Robert Peel, that great modern minister whom the country party gave to the nation, declared, when Prime Minister, that the ratepayer was already overtaxed, and there certain charges, police and other, on the national exchequer; we have slumbered since then, but this I take it is in Parliament the position of the question: that no new unjust tax can be thrown now upon the ratepayer. Witness the treatment of the proposal to throw militia barracks on the counties. Our next step is to get rid of those charges, which are not justly to be borne by localities or by one-seventh of the income of the country. Then, as to the position of this question in this country, we have had, in the spring of this year, a discussion at Wellington, at which some very exhaustive speeches were made, and at which this resolution was passed: "That the present incidence of local taxation, falling as it does on one-seventh only of the income of the country, is unjust, and requires revision." I propose, to save time, to take that resolution and discussion as a basis or starting-point. It is printed, and in the hands of most members. I will only say this, that the speeches made on that occasion by Mr. Pigott and Mr. Bowen Jones, and others, must have done more to educate the minds of those that read them on this subject than any speeches in the House of Commons or any statements I have ever read. In those speeches the statements of Mr. Goschen—the inaccurate, dishonest statements, if I may venture to say so are demolished—and the report of the Central Chamber has still further exploded them; therefore we need not dwell on them further here except to say that after those speeches came Mr. Goschen's offer of £1,000,000 a year, together with a bill which was at once pronounced inadequate and withdrawn. That is the position of the question in this county and in Parliament. Now, before going further, I wish to mention two points which are, I think, important. First, I for one am, and I trust all in this room are, entirely opposed to any measure or change that will weaken local government. I look upon it as one of our most valued institutions, and I would sooner see it strengthened than weakened. Government, by centralization, is only fit for those who cannot govern themselves: it is the ruling of clerks and theorist of practical men, and quite unsuitable to the Anglo-Saxon nation. The fearful cataclysm that has overtaken France was a protest against centralization, for what truth there was in the Commune was a yearning for local government; and the passionate cry that comes to us from Ireland is that same protest, a gem of truth involved in wanton agitation; for what is home rule but local government? But I deny that the system of inspection and grant is one of centralization as at present administered. The magistrates of the county have full power over the good and criminals, as also prosecutors over their cases, although the central government pays for nearly all; and when they tried to overtax the costs the other day in Lancashire, the Lord Chief Justice administered a stern rebuke to her Majesty's Attorney-General which, I think, will prevent that recurrence. Then look at our schools; there are men in this room who have almost the whole management of our National and British Schools, half paid by Government; but the inspection and grant does not shackle or interfere with them—rather the contrary, I am told; it produces efficiency—and the same with the workhouses, where the Government pay less, but have more power; their authority then is attended with good effects, and the whole administration is in the hands of the local guardians. Therefore a Government grant, even when amounting to half, or more than half, the expense does not necessary interfere either with efficiency or administration. The second point is this: That it appears to me we must distinguish what charges or objects are local, what national, and what partly local and partly national; and also in what proportion,

otherwise we go up against this organized exchequer like a mob, strong in numbers, but indefinite of purpose, and weak in principle. And though I disagree with Mr. Goschen's policy and statement, I think he has some right on his side when he asks, "What is your specific demand? What do you call national charges, and what local?" I propose that we shall let him know; and to prevent any difference of opinion, let us give examples that cannot be questioned. Prosecutions, maintenance of convicts, and the expenses of militia, are examples of purely national charges—sewerage and bridges are, I think, examples of more local charges; but the greatest charge, that of the poor, is quite as much national as local—so are schools, police, and some other smaller expenses, such as vaccination and registration. These are acknowledged to be national by the Government grants, the only question being as to the proportion of each. Now, the subject I desire to call attention to chiefly to-day is the charge for the poor, amounting to £7,000,000, all of which nearly falls on the local ratepayers. What I am going to propose to you is the desirability of the Government paying *one-half of the charge for in-maintenance* including lunatic paupers, for the in-door poor must be acknowledged by everyone who has studied this subject to come under a different category to that of the out-door. The in-door poor are, to a certain extent, chronic and inevitable, besides being rather a stationary quantity. Even with the old Poor-law I find that the in-door poor were not much in excess of what we have now. Moreover, we have two precedents for this making of the in-door poor something else than a local charge; the application of the Protestant Church Endowment in Ireland, and the Metropolitan Poor Act, which charges the whole of the in-door poor on the thirty-six unions of London under what is known as the Common Fund. This is the resolution which I have drawn up for your consideration; it will be the second resolution to-day, the first being more formal: "That the semi-national character of such charges as primary schools, police, and maintenance of convicts, as well as the salaries of the medical and certain other officers, Poor-law officers being acknowledged by the Government contribution of about half of the expense, it is the opinion of this Chamber that the maintenance of the in-door poor, throughout the country, including lunatics and vagrants, as well as some other public expenses, is not a less national charge." Now, the cost of this charge, including lunatics, is £2,200,000. One half would be £1,100,000, and that appears to me not too much for the local taxpayer to throw upon the national exchequer. The amount in some of the unions in this county I have put down, to convey to you what this re-adjustment would amount to. The Government contribution under this proposal would be—in Ellesmere, about £80 per annum; Oswestry, £1,100; Whitechurch, £480; Drayton, £550; Wellington, £1,000; Aitcham, with Shrewsbury, £3,000; Shifnal, £270; Bridgnorth, £800; Clebury, £170; Madeley, £1,300. But there is another consideration of still greater importance which I desire to point out to you. There is at present in the Poor-law administration of many unions a certain very dangerous and ignorant policy of false economy. Out-relief is offered to applicants often quite inadequately, oftener still quite improperly, on the principle that it is more economical. Now, I maintain that the poor must not and cannot be treated on that principle. I cannot diverge here to explain to you that even as a matter of economy it is an unsound system; nor can I explain to you at length the statement which I must ask you to accept as a fact, that excessive out-relief is an excessive evil; degrading to the poor, intolerable to the collective ratepayers, and never contemplated by the framers of our Poor-law. Suffice it to say that all who have studied this subject agree in this view of the question. But if these things are so (and at the risk of seeming dogmatic I venture to tell you that they cannot be rebutted), a re-adjustment, which would at once relieve the over-taxed ratepayer, and indirectly improve the administration of the Poor-law, at the same time raising the poor, and still further lightening the shackles on industry, appears to me a re-adjustment that we can fairly demand, and ultimately must obtain. There are other smaller burdens that should also be re-adjusted, but for the present I beg of you to fix your attention on this, by far the greatest and heaviest and most important item of Poor-law relief. It is my firm belief that with such a re-adjustment as this, getting rid of the false economy argument, coupled

with such improved administration as I perceive signs of, the poor-rate of this country might be reduced at least one-half—for every two shillings you need only pay one—for every shilling you would only pay sixpence. But some will say, and amongst them certain ministers, financiers, and others, "Whence will you get your £1,000,000 per annum?" My answer to that is that it is not for the constituencies, nor for the ratepayers, nor even for the representatives, to find the mode of taxation. That is the special office of the Chancellor of the Exchequer; and if he cannot find it we must get another who will. But, curiously enough, we have just about that sum already to hand in the proposal of Mr. Goschen's to give us the house-tax. The house-tax, to which I called your attention before, amounted to just about a million a year. It would be applied generally, and not locally, as Mr. Goschen desired; but in so applying it we should only be following the precedents of Mr. Gladstone's policy in Ireland and in London in making the maintenance of the indoor poor something more than a local charge. Now, before concluding I wish to illustrate what I said just now about the "tendency of legislators to throw upon the local ratepayers charges for national objects," and to corroborate it by a little episode that occurred in Shropshire a few years ago. The Government of the day sent round to this county and others a suggestion or request that they should provide infantry barracks for the militia; whereupon it appeared to those who were charged with the care of the finances of the county that such a course was hardly legal. After some discussion it was determined to take counsel's opinion on the subject, and a barrister of high standing declared, "That the charge was quite illegal, and that the magistrates could not throw upon the ratepayer the expenses thereof." Armed with that opinion the magistrates went to the Government and stated their case; and what do you think was the answer? Why something to this effect: "O yes, we know it is quite illegal, but we have induced other counties to build them; they're not so sharp as you." Is that right? Is that just? Is that to be tolerated? For what do Governments take the long-suffering ratepayer of this country? Do they think he is like Issachar, a strong ass crouching between two burdens—the two burdens of local and national taxation? It would seem so. But they have already found that this county is not quite the ass they thought, and they may yet find that the united counties of England are stronger than they suppose. And now let me once more beg of you to look at this question from a higher standpoint than mere incidence of taxation or class interest. It is true that a great industry is shackled, almost crippled, in some districts, by the weight of what has been shown to be unjust taxation; but while we are knocking off the fetters from industries, let us also knock off the fetters from some of the industrial poor who are held down by a debased administration. Let us make this question the basis of a revolution in Poor-law administration and the inauguration of a new policy. Gentlemen, I have to propose, "That the present incidence of local taxation is unjust, that many of its objects are wholly national, and that the proposals of Mr. Goschen, formed upon erroneous and misleading statements, are wholly inadequate to rectify the injustice; neither will any measure which continues the exemption of personal property from contributing its fair share towards the general burdens be deemed satisfactory to this Chamber. That the semi-national character of such charges as primary schools, police, and maintenance of convicts, as well as the salaries of medical and other Poor-law officers, being acknowledged by the Government contributing about one-half of the expense, it is the opinion of this Chamber that the maintenance of the in-door poor throughout the county, including pauper lunatics, as well as some other expenses, are not a less national charge."

Captain Cress seconded the motion. He thought so far as the general taxation of the country went, they had no reason to complain or be dissatisfied, for the poor were exempt from the pressure of the income-tax, which fell upon the rich. But when they came to the question more particularly before them that day, he did not think there was the same cause for satisfaction. If any one were to examine the various items of expenditure charged to the county, they could not but be struck with this anomaly—that the owners of property certainly did pay a very large amount of taxation, which benefited a large portion of the community who bear no share whatever in the burdens. It was very desirable therefore that, if possible, the incidence of taxation should be made more equal, and that

they should get more assistance from the Imperial revenue. That principle of getting assistance from the Imperial revenue had been already recognised in various ways—by the assistance given by the Poor-law, by the allowances for the maintenance and conveyance of prisoners, and by one-fourth of the police expenses being paid. And why should not the principle be extended still further? Take the question of the maintenance of the militia. Some years ago, during the Crimean war, they were called upon to erect store-houses and quarters for the permanent staff of the militia; and at present there was a rumour that they were to be called upon to build barracks. And when he came to reflect upon an Act which was passed last session, which took away all patronage out of the hands of the lords-lieutenant, and which had for its object the assimilation of the militia with the army, he did think the entire expenses of the militia ought to fall upon the army estimates. And now with regard to the expense of prisons. In this country was not the protection of life and property an object of paramount interest to all? Were not manufacturers, merchants, and tradesmen interested in the matter, as well as the owners and occupiers of land and houses? How was it possible for a manufacturer's undertakings to be carried on unless he had security; and yet that class paid but a small share of the expenditure that was necessary for that purpose. He came, then, to the more important question of local taxation, as connected with Poor-law relief. He believed he would be found to be correct in his figures when he told them that the poor-rate is levied upon £101,000,000 of property, whereas the income-tax was levied upon £300,000,000 of property. And the latter sum did not include all of such property, for persons having less than £200 a year only paid as £110, and those having under £100 a year did not pay at all. But why should not all payers of income-tax bear their share of the poor-rate? Let them look back, and see what was the origin of the poor-rate in this country. Previous to the Reformation there were many monasteries and convents in the country; and with all their evils they abounded in charity, and the poor never looked to them in vain. Then came the reign of Henry VIII.; and he, at one fell swoop, swept them away, and the country was immediately found to be swarming with vagrants. All in that neighbourhood, he was sure, were well acquainted with the term able-bodied paupers; but their ancestors did not use the word—they called able-bodied beggars "sturdy beggars." The increase of sturdy beggars became so great a nuisance that Parliament had to put a stop to it. And Parliament was found to be equal to the occasion, for they passed an Act to this effect—that every sturdy beggar found prosecuting his avocation, for the first offence, should be flogged, and for the second offence he should be hanged. No sovereign that ever sat upon the throne of England administered the laws with more vigour than Henry, and he administered that law with such effect that upwards of 80,000 persons were put to death in his reign. That treatment had the effect of very greatly thinning the number of "sturdy beggars" throughout the country. But as time went on, in the reign of Elizabeth, sturdy beggars began to multiply again; and the wise statesmen who ruled the councils of that queen were endeavouring for many years to find out some system equally efficacious, but less severe than that adopted by Henry, to prevent it. It was in the forty-third year of that queen's reign that the famous Act of Parliament had passed which had come down to them in the present day. Daniel O'Connell used to say that there was no Act of Parliament ever passed that you could not drive a coach and six through; and there could be no doubt that the framers of that Act (43 Elizabeth) intended that every person should bear his share in the support of the poor. In the time of Elizabeth property consisted almost entirely of houses and land. There was very little personal property in the country. There was no national debt, no property in the Funds, no railway shares, and none of the many charming ways they had, at the present time, of investing money. The Act said "every inhabitant of every parish shall pay," and then it went on to enumerate the different classes of property that were liable—lands, houses, saleable underwoods, coal mines, &c. Well, here two slips were made; but if Acts of Parliament were made in a slovenly manner now, it was not surprising it should have been so then. If the Act had not mentioned coal mines in particular, all mines would have had to pay; but, unfortunately, the word *coal* was mentioned, and it had since been argued that all other mines

must be exempt, and exempt they had been. That was one inaccuracy. The next was in regard to the term underwood. As they knew, there was at present very little underwood in the country that was saleable. The profit derived from woods at present was from the timber and from the bark. But they could not call bark and timber saleable underwood, and so they could not tax them. Why should not the commercial, the mining, and the monied classes bear their fair share of Local Taxation with the owners of real property? He did not wish to set class against class, nor did he wish to throw off from real property any just burden that had been placed upon it, but he did think that all classes of property ought to pay a fair share towards the local burdens of the country. He hoped none would shrink from their responsibilities in that matter, but that, when the subject came to be discussed by the influential of the land, they would meet the subject in a fair and candid spirit, and whether their property be real or personal, he trusted they would do justice and get the burden laid fairly and equally upon all.

Mr. JEBB said he attended there that day with a great deal of pleasure, because he believed the discussion would be one in which no party politics would be introduced. He felt also that in all probability all of them would be able to agree with Sir Baldwin Leighton, who had kindly undertaken to introduce the subject, to whom their best thanks were due, the more emphatically so because he had handled that subject with so much candour and ability. It seemed to him (Mr. Jebb) that the whole subject lay in a very small compass. The Government, last session, admitted that a case had been made out for inquiry, and also, that it would be necessary to alter the existing law. Let them hope that, when the proper time arrived, it would be altered fairly and equitably. What they said was that houses and land, as regarded local taxation, are over-taxed, while personal property was under-taxed, and they therefore required, as was remarked by Captain Cust, a more equitable distribution of the burden. For instance, one man has £5,000 a-year in land, and upon that, for local purposes, he is heavily taxed, while another man in the same parish has £5,000 from the funds, and lives in a small house, say of £50 a-year rent; the second man pays nothing at all towards the local rates beyond the very trifling sum he pays upon his house. Take again the case of railways. Railway shareholders are liable to taxation for local purposes, but railway debenture holders escape scot-free. He might say, shortly, that in all this there was neither sense nor justice. When the poor-rates were first imposed upon this country, the great bulk of the property consisted, as Captain Cust had also pointed out, of lands and houses. He might remark, in passing, that real property was easily assessed, and easily taxed; and it had always come in for a large share of the burdens. Very much in the same way a farmer was in the habit of keeping a poor horse at home, and if an emergency came, he was always at hand to plough, or to harrow, or to do anything else that was required of him. In these days a great change has come over the country. There used to be little or nothing but real property. Now personal property was in excess. That being so, he would ask why should not a little of our excellent principle of free-trade be infused into local taxation—a little of that free-trade which embraced, now-a-days, almost everything, with the scandalous exception of the malt tax. Now, suppose for a moment that the manufacturers had occupied for the past twelve months the position that landlords and occupiers had filled with respect to local taxation. Did they think they would have been satisfied with it? Would not they have had many speeches up and down the country in all the large towns? Would there not have been agitation here, and there, and everywhere? Would not chambers of commerce have been moving in all directions? For his own part, he rejoiced that chambers of agriculture had followed in the wake of chambers of commerce, and he trusted that one effect of it would soon be the passing of a bill upon that important subject of local taxation. It was a subject, he was quite ready to admit, which was not without its complications and its difficulties; but that was no excuse for the postponement of legislation upon it. And he hoped if a bill was passed, it would not be passed hastily and slovenly, with loop-holes for coaches and six to drive through; but that it would be well considered throughout, so that when it is passed it will be a credit to Parliament, and the source of satisfaction to all classes in the community.

The Rev. C. F. C. PIGOTT said he thought the resolutions had been wisely drawn up, for one of them affirmed the general principle; while the other set forth a more special and particular part of the question they were discussing. They must, in the first place, keep steadily before the public their claim in full, viz., that income from every source should contribute to the Poor-rate. That claim stood on a very plain and simple basis—the self-evident justice and reason of the thing itself, viz., that charges which were national should be defrayed by the nation. This had been the intention of the legislature in the origin of the Poor-law, as was clear from the act of Elizabeth; and it had been reaffirmed by a most able committee of the House of Lords, after a full and careful examination of the whole subject. We might congratulate them on the progress the question had made during the last year. They had now eighty or ninety members of Parliament on the general committee; and in the division last February, in a very full House, the Government had only a majority of fifty-one over Sir Massey Lopes. Since that date the towns had shown signs of moving in the matter, especially the metropolitan boroughs; and if this movement went on, they would soon achieve success. The debate in February last had done much to educate the nation on the subject. Indeed it was especially a matter for the towns to take up, as houses paid a larger share than land in the common burden, as having a rating of something like £65,000,000 against £54,000,000. He hoped every effort would be made to prevent any final measure being carried next session, as a year or two more was needed before the public could take in the rights of the matter fully. It was especially a poor man's question, for the poor paid a very undue share; and the rates, moreover, were one main obstacle to the working man having a decent house over his head. Builders would not speculate in houses of this class, because they did not pay interest for their outlay; and it was of little use to educate the poor as long as they were crowded into dwellings unfit to ensure order and decency. He had listened to Sir Baldwyn's speech with great satisfaction; and from no quarter could what had been advanced come more appropriately than from one whose father was the greatest of local administrators, and who had taught them the invaluable lesson that they should wish to lessen paperism with all its miseries, without waiting for the time when its burden, or what was left of the burden, would be redistributed, and that on fairer and juster principles. It was far better to try and lessen the evil than merely to make your neighbour pay a fairer share of its cost. What they should keep mainly in view was to improve and elevate the condition of the working man, to help him to help himself, instead of increasing his dependence on others. He hoped they would always go home from these meetings with some practical end in view. As far as the rural unions were concerned they had the matter largely in their own hands. They should especially take care to put the ablest man they could find in the chair at their boards of guardians; they should encourage provident clubs, allotments, education; put a check on the public-houses, and administer charitable help on wise, and not unwise, principles, and then they would presently see an improvement in the evils complained of, which in their present state were a disgrace to a Christian country.

The CHAIRMAN said as there seemed to be no one else anxious to speak upon the question, he would put the resolutions that had been proposed to the meeting; but before doing so, he thought it would be well just to glance at the question from the point at which they had just arrived. At former discussions, not only in this country, but at the Central Chamber and throughout the country, he thought they had established a certain position. It would be seen that they had not looked back into the questions that day so much as they had looked forward, so as to see what they should do in the future; but he thought they might lay it down as a rule that it was recognised as an injustice that a large amount of the revenue of the country should be exempt from paying towards the

national burdens. That was one point that they had established. And they had established also the point that a large amount of the income derived from local taxation was abrogated to different purposes to that for which it was intended—that the income derived from local taxation was devoted to national purposes. They found from the returns of the Government that, although real property paid a good deal more towards local taxation than it ought to do, it did not pay so much towards imperial taxation as personality. Mr. Goschen's statistics showed that real property paid 14 per cent., against about 20 per cent. towards imperial taxation; but, on the other hand, they found that if imperial and local taxation were taken together, real property paid 33 per cent., and personal only 14, so that real property paid as two to one both to local and imperial taxation. Well, that point established, how could they alter the present state of things? Having referred to the solution of the question suggested by Sir Baldwyn, which he said was a fair and reasonable one, Mr. Jones said they must not lose sight of one thing—that they had got a certain amount of personality that was not assessed to the Poor-rate. Sir Baldwyn had told them one thing that had not been adverted to in the discussion that followed the opening speech. It was not only that they must look at the incidence of the rates to bring about an improvement, but they must endeavour to improve their position themselves. Sir Baldwyn told them that he believed that by better administration they could effect a very great saving in the rates, and if they had better administration, not only would they effect that saving, but they would at the same time be improving the social position of the poor, which is itself a very great consideration. Referring to the bill of last session, Mr. Jones said there were some points in it that were worthy of notice, and among them he mentioned the administrative portions of the bill, and the principle of parochial boards. These were principles he thought they had always advocated. Then there was the extension of the rate to descriptions of real property not now liable. There are certain exceptions at present—woods, metalliferous mines, &c.—which Mr. Goschen proposed to rate, and so to extend the area of rating upon real property. There was a very great objection, he thought, to one proposition of Mr. Goschen—the proposition for the division of the rates between landlord and tenant. He thought that was not calculated to do good in any way, for if the landlords were called upon to pay the rates, a readjustment would have to take place at the first opportunity, and he (Mr. Jones) believed it would have a discouraging effect upon agriculture; for although it might relieve the tenant from a portion of the rates, it would have a tendency to get landlords to work upon the rack-rent principle and discharge leaseholders. The encroachments that had been made upon the rates had been in general gradual. They had evidence of that with regard to the allowances granted from the Treasury for prosecutions. These costs had been removed from local to imperial taxation by Sir Robert Peel, but gradually disallowances had been creeping in, which were certainly not right in principle; but they had now become almost established in practice, and it was only a short time ago that an opposition took place of the part of a court of quarter sessions in one of the counties. He thought that was a subject worthy of the consideration on every quarter sessions in the county, and he hoped, at the next meeting of the magistrates for that county, the matter would be brought forward. Before he concluded, he would ask them to thank Sir Baldwyn for his admirable address.

Capt. CUST seconded the vote of thanks to Sir Baldwyn. The name of Leighton was, he said, honoured and respected, and the name of the late Sir Baldwyn would, for the great services he rendered to the county, long be remembered by them.

Sir BALDWIN LEIGHTON having replied,

Mr. STANLEY LEIGHTON proposed a vote of thanks to Mr. B. Jones for the very business-like manner in which he had conducted the debate, and the valuable aid he rendered the Chamber at all times; and this was also carried.

LOCAL TAXATION.

At the dinner of the Blandford Agricultural Society the Rev. Prebendary FARQUHARSON said he was more and more convinced that what they required in these days was unity of action; it was necessary that they should get rid of

their divisions; he wished he could say their religious divisions as well as their secular. He would say a few words with the view of showing them that he sympathised with them in one respect very much indeed, namely, in the amount of rates

for one purpose and another which they had to pay. He did think that the time had come when the area of assessment should be enlarged, and when other classes of the people should be called upon to support gaols, police, and lunatic asylums in an equal degree with the occupiers of land. He could not exactly see the justice of a person who derived a benefit from property being allowed to escape from paying his fair share towards the maintenance of those institutions from which he was deriving the same benefit as his neighbours who were occupying land or houses, simply because he had shut himself up in some lodging or other. For instance, that party considered that the weights of his grocer were unjust. He accordingly gave information to the police, and the police tested them and compelled them being made just. He thus received a benefit from the police. In another case he went to the relieving officer and told him that a certain person was a lunatic and ought to be taken to a lunatic asylum, but not at his expense; no, at the expense of the ratepayers! He thought the public mind was becoming awakened to the fact that common charges ought to be more widely borne, and that they who were connected with the land should be relieved of their burdens to some degree by a portion of the money which they at present paid in rates being obtained from other sources. He trusted their representatives in Parliament would bear that in mind in the next session. Mr. Fowler, who took a great interest in those matters, had informed him that as many as eighty members of Parliament had given their adhesion to the view of the question which he, in common with many other agriculturists, entertained, and that there was now a large and united body who would do their utmost to ensure justice where they thought it was so much needed. He had made those few remarks upon the subject for the purpose of opening it to the meeting, and he had no doubt Mr. Portman would be very glad that he had done so because it would be something fresh for him to speak upon.

Mr. MANSEL-PLEYDELL, the Chairman, said, as far as he had studied that question, he believed the great help that local taxation would give to the country would be much more in favour of the landlord than the tenant.

The Hon. W. H. B. PORTMAN, M.P., said: I have very little doubt that before this time next year the ballot will have become the law of the land. I have never been a supporter of the ballot; I have voted against it; but at the same time I am bound to say that two or three things which occurred last autumn have very much staggered my opposition to it. I will give you two instances. At the time of the strikes at Newcastle, the working engineers wished to express their opinions by ballot, but this was objected to by the leaders of the movement, because they did not think they could trust their followers to go with them to all lengths, and to submit to all the privations which they themselves were prepared to undergo. In the other case, the hand employed by a large firm struck for nine hours' work. There were 40 of them, and the question was put to the ballot amongst themselves. Well, 30 of them were found to have voted for 10 hours, and only the remaining ten for nine. My own impression is this, that if we do have the ballot; if voting at elections is to be carried on in secret, we ought to go a step further and allow members of the House of Commons to vote in the same way. I tell you honestly that I have always been opposed to the ballot, and I cannot cheerfully vote for it. I do not like the principle, and I think we had better continue to conduct our elections as they have been conducted hitherto. I now come to the subject which Mr. Farquharson has suggested. I have a few statistics here which I have extracted from a report by Mr. Goschen, the late President of the Poor-law Board. They are very curious figures, and I dare say Mr. Fowler knows them already, but perhaps some of you do not. Well, the average amount of rates of all kinds paid in Dorset is just a half-penny in the £ above the average of England and Wales. You know that, don't you, Mr. Fowler? In 1865 we heard a great deal about County Financial Boards, and in that year Boards of Guardians were responsible for an expenditure in round numbers of £10,000,000 of money. In the same year magistrates and county treasurers were only responsible for an expenditure of £2,300,000. Then there is another curious fact, that the aggregate local expenditure of England and Wales in that year was somewhat beyond the receipts. Of the money raised, 43 per cent. was spent in town districts, 15 per cent. in rural districts, 31 per cent. in mixed

districts, and 8 per cent. in other ways. There can be no doubt that of the many branches of expenditure chargeable on the county rate, some have of late years materially increased; but at the same time the Consolidated Fund does more for us than it did. The relief of the poor, for instance, has much increased. In round numbers there has been an increase of £8,000,000 in local burdens. Of these £8,000,000 £2,000,000 of Poor-law expenditure are charged partly to urban and partly to rural rates, £5,000,000 to town rates, £500,000 to county police rates, and the remaining £500,000 to highway and county rates, mostly rural. Mr. Goschen's report also contains some curious figures in reference to the proportionate value of lands and houses. In 1814 the total annual value of the lands in this country was £37,063,000; of houses, £14,895,000. In 1843 lands had risen to £42,128,000; houses to £35,556,000. In 1868 lands had risen to £47,767,000; houses to £68,013,000. The value of land, therefore, has been far outstripped by that of other kinds of property. Taxation on land has not increased in a greater proportion than the value of land, but the poor-rates have increased between 1838 and 1868 about £2,000,000, while the share borne by the land has decreased to about the same amount. There is another point. Mr. Goschen got reports from foreign countries as to the relative proportion of taxation borne by the land. The results are these: In 1878, in the United Kingdom, land paid five per cent. of the imperial taxation; in France, 18 per cent.; in Prussia, 11 per cent.; in Belgium, 20 per cent.; in Holland, 8 per cent.; in Russia, 11 per cent.; in Austria, 17 per cent.; and in Hungary, 32 per cent. No doubt we shall hear something on this subject from Mr. Fowler. I will, therefore, read an extract from the concluding portion of Mr. Goschen's report to the Government. His words are these: "The increase in local taxation in England and Wales has no doubt been very great—less than in other countries—but large enough to justify the especial attention which it has aroused. The greater proportion of the increase, however, has fallen on urban and not on rural districts." Mr. Farquharson says there is no reason why personal property should not pay a portion of those rates, but the difficulty is how to it? If Mr. Fowler can elucidate the point I shall be glad to assist in furthering his views.

Mr. ROBERT FOWLER (Whitechurch) said, as to local taxation, the scent appeared to be drawn from the real question at issue. To-day Mr. Portman had made it appear as if the question was between lands and houses. But that was not the question, for lands and houses were both real property; the issue was rather between real and personal property. Mr. Portman would perhaps excuse him, but he knew as well as he (Mr. Fowler) did that that was the great point at issue. Fifty years ago the amount of real property in this country was represented to be between 70 and 80 per cent. of the whole property of the nation; but what was the present proportion? Why real property was now only 29 per cent.; thus 71 per cent. was personal property. Such had been the great change that had taken place within the last fifty years. Was he to be told that this change was not a great loss, that the great local taxation representing £20,000,000 should not be brought to bear upon personal as well as real property—was £20,000,000 to be raised upon 29 per cent. of the national property, while 71 per cent. passed scot free? Had now the owners of the latter the advantage of the country's laws equally with the owners of the former? Was this justice? Could it for one moment be supposed that the owners of real property would sit quiet and allow this state of things to continue as it had so long existed? They would remember that last year the Government thought proper to bring in a measure which was called the Local Taxation Bill. Directly he had read it he said, "This is a bill to remove the good feeling which now exists between landlords and tenants. It can have nothing to do with the question before the country; if this bill should pass it cannot in any way touch that question."

The Hon. W. H. B. PORTMAN, said, respecting the great question in which Mr. Fowler took so much interest, it should be remembered that if towards the local rates you got more assistance from the Consolidated Fund you would have less control over them. Mr. Fowler was quite right in pressing the importance of the relations between real and personal property. It was a question which would perhaps take some years to finally settle; but it must some day be tackled, and he hoped a good result would issue.

THE PROHIBITION AGAINST "ROYAL" SHOW STOCK.

At the annual meeting of the Staffordshire Agricultural Society, Lord Hatherton in the chair, the Report stated that a resolution will be submitted to this meeting to alter Rule 19, the effect of which alteration will be to exclude from exhibitions of this society stock which has been shown in the same year at the meeting of the Royal Agricultural Society. The committee would point out that there is sometimes this disadvantage attending the present arrangement, that when members of this society are known to have animals prepared for exhibition at the Royal Agricultural Show, it may deter others from bringing stock in ordinary condition to the show of this society, which it desires to see more generally done. On the other hand, the Society is anxious that the best stock should be shown at its meetings, and this the proposed change in the rule might perhaps have the effect of prohibiting.

The CHAIRMAN: There was one question to be brought forward on which they should be glad to hear what there was to be said, viz., a resolution to prohibit animals which had competed at the show of the Royal Agricultural Society from competing at the meeting of this society in the same year. He was quite certain that Mr. Masfen would not have given notice of that resolution without strong reasons, for, as the report stated, if carried, it would probably be the means of preventing some of the finest animals, which they must all have great pleasure in seeing, from being exhibited at the county shows, but at the same time there was no doubt that the knowledge that animals which had been exhibited at the Royal Society's show would come to the show of this society tended to prevent members from sending good class animals, knowing that animals which had been at the Royal show would be sure to supersede theirs. Well, as this society wanted not only quality but quantity, it might be a great advantage to alter the rule as Mr. Masfen proposed, but they should be glad to hear what was to be said on the question, for and against.

Mr. MASFEN moved that Rule 19 stand as follows: "Rule 19.—All stock (except stallions) qualified to exhibit shall be bona fide the property of the exhibitor at the time of entry; and shall have been in his possession three months at least previous to the exhibition, except rams, which nevertheless must be equally the bona fide property of the exhibitor, and shall not have been exhibited at the meeting of the Royal Agricultural Society in the same year." He said the Report stated the reasons for and against the alteration of the rule. His object in proposing the alteration was not to curtail the number of exhibits at the Society's show, but very much to increase them. He had come to the conclusion, from his own observation, having attended a great number of local shows in different parts of the kingdom during the past ten years, that very few of the exhibitors at the Royal show followed up their venture at the district shows without very much injuring those shows in point of merit and numbers. It frequently happened that if a man had competed at a Royal show he sent his stock not only to the county show but also to many of the shows in different parts of the country, and he (Mr. Masfen) had learned that in local shows where there had been a good entry there was no certainty of many of the animals coming to the show owing to the fact that after the entry had been made it had been found that animals which had been exhibited at the Royal Agricultural Society's Exhibition were about to compete. It practically amounted to this: that where an animal that had gained distinction at a great show was to be exhibited at a local show, a farmer pure and simple had to compete for the second prize only, the first prize being certain to go to the animal that had been specially prepared for exhibition. It was not intended that local shows should give encouragement to that extreme preparation of stock which it was necessary animals should undergo to have any chance of success at a Royal Agricultural Show, nor was it to the interest of the tenant farmer to prepare his stock in that way generally; therefore, it was quite natural for a farmer to say, when he knew that Mr. So-and-So was going to exhibit a sheep, bull, or heifer at a local show, which had just before appeared at the Royal Agricultural Society's Show—it was natural he should

say, "It is no use me competing, because I am, in fact, out of the competition, except for the second prize, and it is not worth the expense of sending my animals across the country to compete for the second prize." And it was not only the money that was of consideration, but many men who thought nothing of getting a second prize thought a good deal of getting a first. Having been a judge himself, he knew many instances where animals had been brought to such a condition by unnatural feeding to fit them for shows as to render them of no value at all for propagating their species, yet the rule as it at present stood not only encouraged preparation of animals for show, which preparation unfitted them for breeding purposes, but did an injustice to tenant-farmers by practically preventing them from exhibiting animals of a very much more useful class than those which were fed for show. He did not wish to exclude these animals from the local shows in succeeding years, but only in the years in which they had been prepared for the great shows, for in after years they would compete on much the same terms as other animals.

The Rev. E. C. PERRY seconded the resolution. He said it was a subject upon which he had thought a good deal. Whatever tended to prevent the great majority of farmers of the county coming forward to compete at the county shows must tend materially to lessen that interest in the shows which those connected with the Society wished to encourage. The standard of feeding to which animals must attain before their owners could hope for success in a competition at the Royal Agricultural Show was such as almost to preclude the possibility of the animals being of any great service for breeding purposes at later periods. He thought Mr. Masfen had so fully shown the advantages that would accrue from an alteration of the rule that most, if not all of those present, must see that the interests of the Society would be promoted by the change.

Mr. CAREINGTON suggested that the rule, with Mr. Masfen's idea embodied therein, would be more clear if it stood as follows: "All stock (except rams) qualified to exhibit shall be bona fide the property of the exhibitor at the time of entry, and shall have been in his possession three months at least previous to the exhibition. All stock (except stallions) that has been exhibited at the meeting of the Royal Agricultural Society in the same year shall be ineligible for competition."

Mr. MASFEN adopted the alteration.

Mr. TIMMS said it was a weak piece of business to cut at men who had shown at Royal exhibitions, for there were farmers who could show successfully against winners at the Royal, where there was the worst judging that could possibly be done.

Mr. WALKER said that if the show of the county society had been open to all England then he could have concurred in the alteration proposed, but he could not agree with it under present circumstances. Perhaps he might be classed as "one of those travelling exhibitors," but he thought it was hard to exclude a farmer in the county from competing at the county show with the best stock he had. This stock was produced at great expense; and every one had an equal chance of producing it. If the alteration were made it would put him, as an exhibitor of pigs at the Royal shows, to great expense, if he were also to compete at the county shows.

Mr. COXON remarked that he also might be considered as "one of the travelling exhibitors" spoken of by Mr. Walker, but he entirely agreed with the observation of Mr. Masfen. He had been for many years an exhibitor at both the Royal and county shows, but the exclusion of Royal show competitors from the county shows would tend so much to increase the competition among tenant farmers at the latter, that he felt that if he wished to compete at the Royal as well as the county shows he ought not to object to send different animals to the latter from what he sent to the former.

Mr. WALKER said the ease of sheep-breeders who held annual sales was very different from the ease of owners of cow stock or pigs. A sheep-breeder had a whole flock to fly to, but he, as a pig-breeder, had not the same advantage.

The motion was then put and carried.

THE BREEDING OF CATTLE.

Mr. T. F. JAMIESON, Lecturer on Agriculture in the University of Aberdeen, has recently delivered the following lecture "On some Points connected with the Breeding of Cattle."

Many people must have observed with some degree of surprise the prices given at certain sales of live stock during the past few years. When heifers sell for a thousand guineas and bull-calves at a like figure, we naturally ask what peculiarity there is about the animals to excite so keen a competition. To the uninitiated many of them seem no better than might be picked up in a market at a very moderate price; but it is evident there must be some hidden virtue, real or supposed, that acts as a charm on their admirers. Lords and commoners, assemble round the ring, and the bids rise rapidly by fifty guineas at a time, and men come from America and far Australia to secure some of the lots. On inquiry, we are told it is *Bates' blood*, or, it may be, *Booth's* that constitutes the charm or perhaps the animals are of the Duchess or Oxford tribe; that it is not so much the beasts themselves as their pedigree that is the attraction. The competitors are anxious, eager men, and

Their expression is so solemn, and so earnest is their tone, that nought would seem worth living for but 'red and white and roan'.

The white bull-calf just knocked out at a thousand guineas is entitled "Duke of Oxford the 20th," and its lineage running through many a far-famed sire is recorded in the catalogue for ever so many generations. And who is Bates? the stranger may ask, and what is the Duchess blood that it should be so famous? As the breeding of cattle has become a sort of science, and is regulated by laws or conditions which seem to apply not only to the animal kingdom but also to the human race itself, the subject is one of considerable interest, not only in regard to agriculture, but also on account of its relations to biology at large. The record of facts connected with the breeding of our domestic animals, which has been now accumulating for many years, may be studied with advantage even by those who have no special interest in the pursuit itself. There is every reason to believe that pedigree is of importance in regard to the mental faculties as well as to the bodily features and constitution, and the progress of investigation leads us to suppose that every peculiarity of mind and body may be inherited. Some even hint that there is such a thing as hereditary brains, and pedigree tells in a Hohenzollern as well as in a Shorthorn. No one paid more attention to pedigree than Thos. Bates, who brought the Duchess tribe of Shorthorns first into public notice. He was a native of Northumberland, born in 1775, and sprung from a family which had long been resident in that county. Being in easy circumstances, and owner of some landed property, he was able to devote his attention to the rearing of cattle under very favourable circumstances. He had also the advantage of a tolerably good education, having at one time intended entering the Church. He was well acquainted with Charles and Robert Colling, although considerably younger than either of them, and knew a good deal about both their herds. The northern counties of England seem to have possessed a good kind of cattle for a considerable period, owing apparently to the natives of the region having a taste that way, and it is evident many excellent herds existed before Charles Colling began to devote his attention to the subject. Early in the last century, we learn that several of the landed gentry in Northumberland prided themselves in the excellence of their cattle. The Smithsons of Stanwick were among these, and Sir Hugh Smithson, who married the heiress of the noble house of Percy, used to weigh his cattle periodically, as well as the food they ate, so as to ascertain the amount of improvement made in proportion to the food they consumed—the first authentic instance we hear of this being done; and it is from his stock that Bates' Duchess tribe are supposed to have originally descended. The Studley family had also long been famous for the excellence of their shorthorned cattle, and the Blacketts

at Newby, near Ripon, had their entrance hall, we are told, hung with portraits of their more celebrated animals. In addition to this native stock, we find that a Mr. Michael Dobinson, early in the 18th century, brought over some very superior cattle from Holland, which were of material service in improving the breed of Shorthorns in the north of England, and Sir Wm. St. Quintin also imported others from the same quarter. It is clear then that Colling had good materials to select from, and, in fact, Bates seems to think the Shorthorns were at their best about 1770, and alleges that both Robert and Charles Colling repeatedly admitted to him that the Shorthorns were better before they came into their hands than when they had them. This perhaps may be true in regard to their milking properties, for some of the early Shorthorns, as I shall afterwards have occasion to show, seem to have far excelled their modern representatives in this respect, and Bates laid much stress upon the yield of milk, but in other respects, as flesh producers, the breed, instead of falling off, is generally considered to have much improved. For example, George Culley, writing in 1786, says—"Within a few years, a very rapid improvement has taken place in the breeding of short-horned cattle, so that in a few years, I have reason to think, they will surpass their rivals the Longhorns." No doubt this improvement to which he refers was that carried out by Charles Colling. It is to be regretted that accurate data do not exist for enabling us to compare the animals of the present day with those which existed in the last century, or even fifty years ago. And we occasionally hear some judges and practical breeders, like Mr. Sanday, asserting that the animals bred at the present day are inferior both in size and quality to those of former times. We want for comparison, the elements of weight and measure, and have to depend merely upon hearsay and matter of opinion. If correct measurements were recorded of the size of the animals at certain periods of their age, we could at once tell whether those we now produce were equal in magnitude and rate of growth to the races of a former generation. The fineness of bone could also be a subject of accurate measurement. At our national shows there should be committees appointed for the purpose accurately measuring and noting the features and qualities of the finest animals in the various classes, and let a record of the particulars be inserted in the journals of the societies. If something of this kind were done, we should know what progress takes place, whereas, by the present system, no certain data are established, and we can't tell whether our breeds are improving or falling off. From the fossil remains of oxen, got in the more recent geological deposits, naturalists are of opinion that at least two species existed in this country before it was inhabited by civilized man. One, a very large kind of ox, called the *Urus*, whose remains are sometimes got in the marl-beds and peat mosses of this country, and Julius Caesar mentions it as occurring in a wild state in the forests of Germany in his day. It seems probable that the Shorthorns and some of the other large breeds, such as the Hereford, are descended from this great wild ox. It is believed to have been domesticated in Switzerland at a very early period, and Lord Tankerville's cattle at Chillingham Park, in Northumberland, are thought by some to be descendants of this species, although much degenerated in size. These half-wild cattle at Chillingham Park are white, with the inside of the ears reddish brown, the eyes rimmed with black, muzzle brown, hoofs black, and the horns white tipped with black. According to some old Scottish historians, the wild cattle of the Caledonian forests were white, and furnished with a great mane. Perhaps this may partly account for the great tendency of white to appear in the short horned breed, notwithstanding the desire of breeders to avoid it. Many of the best early herds of Shorthorns near Ketton were white, with red ears and red spots on their necks, and it used to be remarked that there was a great tendency to white in all those that were bred from closely related blood. The other species of wild ox (called *Bastouffrons* by Pro-

fessor Owen), was of a much smaller size, had a short body and fine legs, and is believed by Mr. Dawkins, to have been domesticated in England at the time the Romans occupied it, and to have supplied food to their legions. Owen supposes that the small Highland and Welsh cattle are derived from this species. Nothing certain is known as to its original colour. From the magnitude of the skeletons of the larger species of fossil ox, it would seem that the great size of our Shorthorn and Hereford cattle, is not a feature we owe to the progress of modern improvement, but is an ancient characteristic of the breed. The main object for which we keep cattle is the production of beef and milk, and the most valuable breeds are those which best fulfil that object. A doubt exists as to the possibility of combining in great perfection both of these qualities. Some advise that we should have separate breeds adapted for each purpose; one for the dairy, and the other for the production of butcher's meat; and that it is a mistake to think of getting both advantages united to any great degree in the same animal. Such was the opinion, for example, of George Culley, who thought that where this is attempted we are likely to get neither in perfection: in proportion as we gain the one, we lose the other; the more milk, the less beef; the more beef the less butter. "I am inclined," he says, "to think you cannot unite great milkers with quick feeders. They are two different types of cattle, adapted for different purposes, and we should make our selection according to the particular object we have in view. If we want dairy produce, let us select both bulls and cows from the best milking tribes we can find, and keep to that sort exclusively; breeding on both sides from the families most remarkable for the production of milk, and in due time we shall attain our object. On the other hand, if we want feeding or grazing cattle for the production of butcher's meat, let us select the quickest feeders wherever they can be found; but let us keep to distinct sorts and don't mix them, for by attempting to unite the two we shall probably spoil both." And Culley points out that the two sorts belong to different types of cattle. "The great milkers are lean-backed, flat-sided, big-bellied, poor, and ill-looking, although kept on good fare. Whereas the other are thick-set, broad-chested, round, and barrel-shaped beasts, light in the paunch, and well-covered on all their points. I have quoted Culley's opinion because he was considered a very good judge, and a high authority in his day. Although contemporary with Charles Colling, he was an older man by sixteen years, being born in 1734. He published his essay on live stock in 1786, so that his remarks were made before the improved Shorthorns came much into notice. Culley was a pupil of Bakewell, who is said to have had a special liking for him, and often took him along in his tours to examine the various breeds of live stock throughout the kingdom; so that he came to be considered Bakewell's favourite disciple; and Robert Colling used to say that whatever he knew of the art of breeding cattle he owed to George Culley. There is no doubt a great number of the high-bred cattle of the present day are very deficient in milking properties. This is especially the case with those exhibited at our cattle shows, not only among the Shorthorns, but also in the Herefords, Devons, Polled Aberdeenshires, West Highlanders, and Galloways, which would seem to corroborate the opinion of Culley, that the farther we go in improving a breed for the production of beef, the more we spoil it for the dairy. Some, however, dispute the accuracy of this opinion, and maintain the possibility of uniting both advantages in the same race. Thomas Bates was one of these, and as he had a very long experience as a breeder, and is an oracle on the subject, his opinion is entitled to considerable weight. Bates, when a young man, knew Culley very well, as he lived in the same neighbourhood, and often visited him, and highly esteemed his judgment in all agricultural matters, although he differed from him on this particular point. It would seem to be the fact that there are very great diversities among cattle. Some are great milkers, some quick feeders, and bad sorts may be found, which are good for neither purpose. But it seems also to be the case that there are cattle which unite both qualifications to a considerable degree, and that it may be possible to perpetuate these advantages in a single breed. Both qualifications depend upon certain common properties. There must in each case be a good appetite for the consumption of food, and great powers of digestion; but in the one case the products of digestion are turned to milk, and in the other to fat and flesh. It is

clear enough they cannot go to both at the same time, and a cow that is giving a large quantity of milk will not lay on much beef. But there seems nothing to hinder the production of meat to go on after the secretion of milk is stopped, and when the yield of milk ceases, the same animal may fatten quickly, and grow to a great size. Its produce also may be rapid feeders and good grazing beasts. Facts, however, will perhaps be more to the purpose here than arguments, and as the point is one well worthy of discussion, I shall make no apology for dwelling upon it to some length. More than 70 years ago, Dr. Anderson of Monkshill, who was himself a practical farmer, as well as a man of a highly cultivated mind, remarked that some animals had come under his particular observation which not only afforded rich milk in very large quantity in proportion to their size, but possessed the quality of fattening in a very eminent degree. One of these was a cow of his own, which not only gave an unusual quantity of very rich milk, but yielded it for about eleven months in the year. He kept this cow until she was ten years old, and states that she was at all times in much better condition than the others kept along with her on the same food, and her descendants retained the same quality for several generations, as long indeed as Dr. Anderson kept them. This cow, which was of small size, and of a mixed Kyloe breed, sometimes gave about seven gallons of milk soon after calving, and when well fed would have averaged about five gallons during most of the year. Some of Charles Colling's famous herd of Shorthorns were great milkers. Old Daisy, for example, gave eight gallons a-day; and the Cherry tribe, one of his best families, were also good at the pail. Magdalena, by Comet, was another cow which yielded eight gallons a-day. Colling reserved her for himself when he sold off his stock in 1810, but afterwards parted with her to Whittaker of Burley. Now these are quantities that are seldom exceeded by the best dairy cattle. Mr. Bates informs us that the dam and grandam of Hubback were both good milkers, and Hubback was one of the best sires and quickest feeders ever known. Perhaps the very best tribe of cows Charles Colling had, and which, so far as we can judge, were his own favourites, was that which is known as the Lady Maynard family, the first of which he got from John Maynard, of Eryholme, in 1786. Robert Colling is reported to have said that it was to the blood of this family that the great superiority of his brother's cattle and of his own was due. Colling bought this cow when seven years old for £30, with 12s. back of a luck-penny, and he kept her until she was nineteen years old, and had bred no less than twenty calves, and was still a fresh-looking cow. She was the dam of Phenix, and grandam of his bull Favourite, which he used more than any other, keeping him until he was thirteen years old. Any one who takes the trouble of looking up the pedigrees of the early Shorthorns will see that Favourite's blood preponderates far more than that of any other animal, so much so that we may almost say the improved Shorthorn breed are the offspring of Favourite. This is the case because they all run back to the Colling's stock, which latterly were perfectly saturated with the blood of Favourite. Now John Maynard himself, who sold this fine cow to Charles Colling, told Thomas Bates that he remembered the tribe to which this animal belonged as far back as the year 1750, and that the originals of them were great milkers, the first three in succession having always to be milked before calving. It is true that of Favourite's blood 50 per cent. was due to the bull called Foljambe, who was his grandsire on both sides, which doubtless led Colling on one occasion to make the remark that Foljambe was the animal that did him most good. He, however, used Foljambe only one season, and to a very few cows, and sold him when he was but a year old. It would, therefore, seem that he did not think very highly of him, although it is worthy of remark that he should have put him to two of his very best cows. Foljambe himself was out of a fine neat cow called Ilaughton, an extraordinary milker, but his sire was an inferior animal, which probably induced Colling to part with him so soon. We see, therefore, that Favourite had a good milking pedigree through both lines, and it is clear that Colling resembled Bates in paying much attention to this point, for many of his animals were not only good, but extraordinary milkers, and it appears that Charles Colling at first kept cows solely for dairy purposes, and that it was only after he picked up Hubback that he turned his attention to the breeding of Shorthorns. The dam of Robert Colling's

cow, Bright Eyes, gave 15 quarts of milk at a meal, and she produced the bull Marske, a noted sire. Another instance of an extraordinary milker being also a capital breeding animal was a cow called Barforth, belonging to Mr. Wastill of Great Burdon, a well-known breeder and noted judge of cattle, and a contemporary of Colling. This Barforth is reported to have given nine gallons of milk a-day, yielding at the rate of twenty-four imperial pounds of butter in the week. She was a well-bred Shorthorn, and dam of Robson's bull, which figures in some of the best early pedigrees. A cow of this kind, I suspect, must be a *rara avis* among the Shorthorns of the present day, and it certainly taxes one's credulity to believe some of these statements; but, from the number of independent witnesses, whose testimony seems to be worthy of credit, we are compelled to believe that many of these early Shorthorns were uncommonly fine milkers, instances of eight gallons a-day being mentioned by many persons, and an affidavit was sworn before a magistrate in America that an improved Shorthorn cow imported into that country produced milk that yielded twenty pounds of butter in the week. Thomas Bates seems to have selected his Duchess tribe on account of their combining great milking powers with an aptitude to fatten readily. I believe Bates is generally considered to have been a trustworthy man in his statements, and correct in his facts, although many thought he had an overweening opinion of his own stock. He tells us that his first Duchess cow, which he bought from Charles Colling, gave seven gallons of milk per day, viz., fourteen quarts at each meal, the practice being to milk only twice a-day, morning and night, and the milk yielded eighteen imperial pounds of butter in the week. He never had a cow that to his knowledge gave more than this. This same cow was the dam of his bull Ketton, a very fine animal, and an excellent sire. As this Duchess tribe has become so famous, and sells at such enormous prices, I may here give a few particulars regarding them. The first of the family we hear anything of was bought by Charles Colling from the Duke of Northumberland's agent at Stanwick, in 1784, for the modest sum of £13 sterling. She was a massive short-legged cow, of a yellowish red colour, with the breast near the ground, had a wide back, and was a great grower. Colling called her Duchess, and had often described her to Bates as a very superior animal, particularly in her handling; and told him that he considered her the best cow he ever saw, but that he never could breed so good a one from her. She was descended from the old stock of Sir Hugh Smithson, of Stanwick. Thomas Bates bought from Colling one of the descendants of this cow in 1804 for 100 guineas, being the same I mentioned as being such a fine dairy animal; and he bought another at Colling's sale in 1810. For the latter he paid 183 guineas, and styled her Duchess the First, and from her all the present family have descended. Bates tells us he was induced to select this tribe from having found that they were great growers, quick feeders, with fine quality of meat, consuming little food in proportion to the progress they made, and also from finding that they were equally remarkable as great milkers. Bates asserted that the tribe improved under his care in regard both to growth, aptitude to fatten, and small consumption of food; but admitted they gave less milk than the first cow of the tribe which he bought from Colling in 1804, although what they did give was richer in butter. I have seen no statement of the actual produce in milk from any of them, except the first one of 1804, and am unable to say to what extent the present Duchesses excel as dairy cows. We may readily allow that Bates improved the breed in regard to form and aptitude to fatten, for several of those he produced, especially after the cross with Belvidere, were remarkably fine animals; and at the first show of the Royal Agricultural Society of England, which took place at Oxford in 1839, he carried off all the prizes in the Shorthorn class except one, for which he had not an animal present. Bates' herd was sold off in 1850, shortly after his death, and the animals were dispersed, and fell into various hands. Some of the best of the Duchess tribe were bought by Lord Ducie, and when that nobleman's herd came to the hammer in 1853, the Americans carried off several of the choicest at great prices. At the present time, I believe, Colonel Gunter's herd contains the purest representatives of the family in England, and his Duchess 77th well maintained the fame of the breed by beating all and sundry at Leeds and elsewhere, carrying

off no less than nineteen prizes and seven challenge emps; but the Colonel, having experienced some of the evils resulting from the state of fatness in which it is necessary to bring out the animals at these shows, I believe wisely declines now to exhibit. We see that, although Bates improved the breed in other respects, he admitted that he was unable to keep up the produce of milk to the same degree he got it in his first purchased Duchess. Not only could he not improve it, although he paid much attention to this point, as he sold much better and reared his calves from the pail, but he allows that the quantity fell off, although the tribe improved in aptitude to fatten. This, then, in so far, is a point in favour of Culley's opinion. But I think it may be accounted for by the close breeding which Bates pursued, and which experience shows has the effect of impairing the yield of milk. Bates had a most exalted opinion of the excellence of his own cattle, but other people didn't always coincide with him in thinking them so fine. His father, George Bates, ridiculed his purchase of the Duchess at the Ketton Sale, and termed her a shabby animal, saying he had many better himself, which his son might have had for nothing. George Coates, editor of the Herd Book, also thought she was only "fair;"—rather faint praise, it must be allowed, and she seems to have been generally considered inferior to the Duchess he previously purchased in 1804. The fact is that Bates had his own notions as to what constituted a good animal, and he often railed at the decisions of the judges at our national shows when they didn't coincide with his own views. By following Sir Hugh Smythson's system of periodically weighing the food he gave his animals, and ascertaining what increase they made upon it (a plan he followed for 17 years), he educated himself into a knowledge of what really were the best sort of beasts, and he recommends every one to examine their stock by this criterion, for it was in this way, he tells us, that he was led to perceive the great difference that exists in the various kinds of cattle, and to know the external character which indicated their real merits. Bates laid much value on the milking property, and on the style, quality of hair, and handling. Good form did not in his estimation compensate for defects in these points. He was a very different man from Charles Colling, who seems to have been a very reserved character, but a consummate judge of cattle. Colling kept his eyes open and his mouth shut, and seems to have invariably declined throwing any light upon his proceedings. His chief object in breeding cattle seems to have been to make money, whereas Bates was full of enthusiasm on the subject, ready to impart his knowledge, and fond of impressing on others his own peculiar notions as to what constituted the points of a good animal. He firmly believed that he had the best tribe of cattle in the world, and wished to have them adopted everywhere for the good of the nation and mankind at large. When he thought a good use would be made of them, he was sometimes very liberal in disposing of his beasts, but where he thought the intending purchasers would cross them with inferior tribes, and thereby spoil the breed, and bring his stock into disrepute, he would occasionally refuse to sell at any price. Bates, as I have already mentioned, said that Charles Colling told him that the first cow of the Duchess tribe which he bought from the Duke of Northumberland's agent at Stanwick was the best he ever saw, and that he could never rear so good a one from her. Whether it was owing to this that her produce turned out so much worse than herself, or for some other reason, it is clear that Colling did not cultivate the breed to any great extent, and on this account it seems to me difficult to believe that he thought so very much of them. On looking over his sale catalogue, we find only two animals of the Duchess blood in it, one of them a two-year-old heifer, and the other a yearling bull. None of the older breeding stock seems to have contained any of the blood, and it does not appear that Charles Colling ever used a bull of the Duchess blood. Now, as his first purchase of the tribe was in 1784, and his sale in 1810, he had 26 years' experience of their qualities, and ample time to have propagated them in larger number if he had thought it for his advantage to do so. Most of the animals at his sale were descendants of the Lady Maynard tribe, and I think we must from this infer that the Duchesses were not his favourites, or he certainly would have had more of them. On turning to the sale-catalogue of his brother Robert, who was only second to Charles as a breeder, and who did not sell off his stock until 1818, we look in vain for any trace of the Duchess blood, and as the two brothers

acted very much in concert, we have here another proof that it was not the tribe they thought most of. All Bates' Duchesses trace back to what he called Duchess Ist, which was the cow he purchased at the Ketton sale in 1810. Now, when we examine her pedigree, we find that 75 per cent. of her blood belongs to Colling's well-known bull Favourite, and little more than 3 per cent. to the original Duchess element. Even taking Bates' first cow of the tribe, which he bought in 1804, we find that her sire and dam were both by Favourite; and her own calf, Ketton, was also by Favourite. This shows how strongly the blood of Favourite was infused into the best Shorthorns of those days. As we trace the Duchess tribe downwards, we find the blood derived from the Stanwick cow dwindling rapidly to so fine a fraction that we can hardly appreciate its being drowned out by other strains, in all of which the blood of Favourite preponderates. So that, if there is any confidence to be placed in the recorded pedigrees, the excellence of even the earlier individuals of Bates' herd must be attributed to the influence of Favourite far more than to any other animal; and it would seem almost absurd to assign any appreciable effect to the infinitesimal quantity of the original Stanwick blood now remaining. Although the family soon became Duchesses only in name, yet they continued to be animals of very select blood, for Bates was very particular in regard to pedigree, and took good care to use none but well-bred sires of the choicest families. Of all the sires he used, Ketton Ist had most of the original Duchess blood, and yet it amounted to only 12½ per cent., 75 per cent. belonging to Favourite; for Ketton, as we have already seen, was not only himself got by Favourite, but his grandsire and grandam were so too, which shows to what an extent in-and-in breeding was sometimes carried in those days. Bates had another sort which he held out as an example of the combination of great milking and feeding properties. These were the progenitors of his Oxford tribe. Matelch, his first cow of this family, he tells us, never gave less than twelve quarts of milk at a meal, when on the grass after she dropped her calf. She was the dam of an excellent cow, which Bates called Oxford Premium, because she carried the first prize at the Royal Agricultural Society's show at Oxford in 1839. She also gained the highest premium at the Yorkshire Society's show in the year following. This Oxford Premium was also a good dairy beast, often giving milk the whole year round, without being put dry for calving. I have dwelt at some length on Bates and his herd, as these two tribes of his—the Duchess and the Oxford—have been more run after than any other races in existence. Our American consins are generally reckoned an acute and enterprising race, with a good judgment in the practical affairs of life. It was their bid of 700 guineas for Duchess 66th, at Lord Ducie's sale, that first opened the eyes of the British public to the value of Bates' blood in the market. The present rage for animals of fashionable pedigree, and the extravagant prices of late given for the so-called grand Dukes and Duchesses, remind us of the tulip mania in Holland, which happened more than two centuries ago. The Dutchman, solid and phlegmatic as he is usually reckoned, yet, on that occasion, showed he had a fine vein of enthusiasm in him, and the passion for these interesting plants became so strong that nothing else seemed to the Dutchman worth living for. High and low were carried away by it. Not only speculative merchants, but steady farmers, and men of all classes, from the nobleman to the chimney sweep. Single bulbs sold for 2,000 florins, just as we see an innocent calf now sell for 1,000 guineas: and there were fashionable strains of tulips in those days just as there are of Shorthorns now. One sort, called the *Semper Augustus*, seemed so enviable that a man offered for a single root of it no less than 4,600 florins, together with a new carriage and a pair of horses, with harness complete. Another madman agreed to give twelve acres of land for a root, and gambling in tulips became for a time a consuming passion, just as gambling in railway scrip was many years ago in this country. Who knows therefore but we may see a further development of this excitement regarding pedigree Shorthorns? for enthusiasm, once awakened, is catching, and no one can tell how far a Briton may go for a Shorthorn, when we see to what length the Dutchman went in his passion for tulips. Pedigree is no doubt all very well, but a long pedigree on paper is not always a good one in fact. Many of these fashionably-bred animals are notoriously bad beasts; they have in many cases

been bred so long without proper judgment, and from nearly related blood, that vigour of constitution seems to have been irretrievably lost. They have become ewe-necked, weasel-waisted, leggy, and consumptive, can't stand bad weather, and give little milk; and, doubtless, there are occasional flaws in the pedigree that don't appear in the herd-book, or in the sale catalogues. Our improved races of domestic animals have attained their high degree of excellence by being bred from carefully-selected animals, with a constant weeding out of the bad ones, and it is only in this way that they can be kept up; but to do this requires a degree of judgment and perseverance that few possess. It is men like Charles Colling, Thomas Bates, and Richard Booth that have made our cattle what they are, and it is by men of a similar stamp that we may expect to see them further improved, or even kept from deteriorating. Probably no herds of cattle have turned out such a number of first-class animals as those of Warlabry and Killerby. The Booth family have been noted breeders of Shorthorns for three generations. The herd was founded in the days of Colling by Thomas Booth, who then owned the Warlabry and Killerby estates. He was succeeded by his sons Richard and John, of whom the former established himself at Warlabry, and the latter at Killerby. Although both are now dead, yet the family happily still survives in the descendants of the latter. The animals bred by the Booths have been noted for their fine forms, massiveness, and heavy flesh. It may therefore be worth inquiring whether, in a race of cattle so distinguished for substance and feeding quality, we can find instances of these characteristics being united to good milking powers. Now, according to Mr. Carr, this happened in a number of cases; but, as he does not give the actual measurement of the quantity of milk yielded by any of them, there is a looseness about his statements which I am unable to rectify. Some of the original stock of old Thomas Booth are said to have been good dairy cows, and great grazers when dry; and the first of Richard Booth's Isabella tribe was a cow he bought in Darlington market, which gave brimming pails of milk, and, nevertheless, had a remarkably ample development of the forequarter, an unusual feature in a good milker. Mautain, a celebrated prize-winner, and the ancestor of a fine family of Shorthorns, is said to have been an excellent dairy cow, and so was Toy, dam of the famous twins Neck-lace and Bracelet. Among others of the same characters, I may mention Bliss, the first of the tribe which goes by that name. She was a very heavy milker, and so was her daughter Blithe, the latter being known to produce two or three calves in successive years without ever going dry. She again was dam of Lady Blithe, who has produced more first-rate animals than almost any other cow in recent times, but had no showy pretensions herself, being just a well-bred dairy cow. Safin was another, all a dairyman could desire, giving great quantities of rich milk, suckling two calves, and required milking after them. Princess Elizabeth, by Crown Prince, combined milking and grazing qualities in a very unusual degree, and produced Queen of the Isles, a first prize winner at Chester. Caroline by Fitz Leonard, we are told was a prodigious milker, giving four pailfuls of milk in the day. Camp Follower was also an extreme milker, and died of milk fever, yet shew as a very fine cow, and produced some first-rate stock. Indeed, some of the admirers of the Booth blood go the length of asserting that all the Warlabry tribes were famous for possessing more than ordinary milking powers. These examples may suffice to show the possibility of uniting in a considerable degree the two desirable properties of giving much milk and fattening well, and I may further mention that Mr. Whitaker of Burley and Mr. Wilkinson of Lenton, who both bred many excellent Shorthorns, kept their herds expressly for dairy purposes. Mr. Youatt and the Rev. Henry Berry also agreed in thinking it quite practicable to combine good milking and feeding qualities in the same animal. Mr. Berry had experience of it in his own herd; while Youatt says that many of the cows in the London dairies are as fine specimens of the improved Shorthorn as one could wish to see. It is evident that it would be very desirable to have a breed in which this combination of advantages could be secured, for a race of cattle where the cows scarcely give milk enough to bring up one calf properly must be reared at a great disadvantage, and however excellent they may be as grazing or fattening beasts after they do grow up, yet the cost of rearing the calves during the first year is too great, since it may be said to involve the

whole expense of keeping the cow for a twelvemonth. On the other hand, in a dairy breed, where the animals are neither good growers nor quick feeders, the steers are unprofitable beasts, and the cows, when past use for the dairy, cannot be profitably fattened. Our Aberdeenshire farmers must have something that will feed well, come to the dairy what will—something that will be prime Scots in the London market. They like to see big fat oxen, heavy animals, round as a hog's-head. They don't trouble themselves with your stots of 8 lbs. or 14 lbs., but always reckon their animals by the hundred-weight. This taste for fat beasts has certainly led to the deterioration of the cattle as milk producers, and I rather suspect the Aberdonian in general would agree with Culley in his opinion that first-rate feeders are not to be had from a dairy breed. The fashion of judging at the local and national shows has also tended in the same direction. Round, well-fed animals always look so much better than leaner ones, that nothing has any chance of a prize unless it be fat; and the fatter you can make it, so much better is its chance. Exhibitors are, therefore, obliged to conform to the fashion, and good feeding and skilful training are half the battle. This, however, is ruinous to the animals for breeding purposes; and many of the best ones are spoiled in this way every year. But breeders say they can't help it; they must keep up the character of their herds by exhibiting at these shows, and taking prizes—otherwise, they would lose ground. The evil, it seems to me, might be remedied to some extent by a more careful selection of judges. If possible, men should be got for the purpose who are themselves eminent as breeders, and can distinguish the value of an animal in a lean state, even when pitted against one that is much fatter. If the judges also were selected by the breeders, and not by committees, composed often of people who have little experience in that line, perhaps a better mode of judging might be gradually established at our national shows. Valuable prizes should also be given in the proper classes for animals uniting fine symmetry with good dairy qualifications. If the breeders of Shorthorns and other races of cattle would also afford some information in their printed catalogues as to the milking pedigree of the animals they offer for sale, I think they would soon find that their customers would appreciate it, and that animals well-come in this respect would be looked after, and would fetch high prices at their sales. At present, it is difficult ascertaining anything in regard to this point. The Ayrshire is the type of a dairy animal, and it is very proper that those who rear them should make the development of the milking powers their main object. Let them go as far in this direction as they can, so that we may see what sort of animal will emerge from the continued cultivation of this special feature. The origin of the Ayrshire breed is not very exactly known. It seems to have arisen by a process of selection made with a view to the production of milk and hardness of constitution, without much regard to anything else. Very likely there has been a mixture of various elements; for we learn that there were importations of Durliam cattle by the Earl of Marchmont, in 1750, and of Dutch cows by Mr. Dunlop of Dunlop about the year 1760. There has probably also been an infusion of the Alderney, or breed of the Channel Islands; for Quayle, who

wrote the *Agricultural Survey of Jersey*, states that the Ayrshire was a cross between the Shorthorn and the Alderney; while Col. Le Couteur informs us that General Andrew Gordon, when Governor of Jersey, about the end of last century, sent some of the best cattle to Scotland. A veterinary book, published at Glasgow in 1794, likewise states that the Dunlop cows, which were considered the best milkers, had been produced by crossing the native cows with bulls brought from the island of Alderney. The general resemblance of the Ayrshire and Alderney cattle has been noticed by Professor Low and Col. le Couteur. Youatt, however, seems to think that the Ayrshire breed has originated from a cross of the Holderness with the Highlander; the former giving the milking properties, and the latter the hardness of constitution and small size. The prevailing colour of the Ayrshires is red and white in various mixtures; sometimes they are wholly red, but I believe never wholly white, which is rather curious, for in the Shorthorn, which is also red and white in all proportions, pure white animals are constantly occurring, as if there were an innate tendency to that colour. As Mr. Caird has remarked the great demand for dairy produce has in a great measure made the Ayrshire breed. It has been developed from a variety of different elements by a process of selection. The great mining and manufacturing population of the district in which the breed is located has given rise to a constant demand for milk and butter, and the climate and soil being both favourable for cow feeding, there was a strong inducement to cultivate dairy farming, and to select such animals as were most noted for giving milk. We see that there were importations of Dutch, Alderney, and Durliam cattle—all good dairy breeds. We may be sure that the best milking cows were retained, and the worst ones got rid of as soon as possible. The necessity for acquiring good cows would sharpen the powers of observation in regard to what constituted the outward signs of a milk-producer, and thus the judgment would be educated as to the points to be looked for. Carry on this process for generations, and you have the result. Just as the dense manufacturing population of Lancashire and York has developed the Holderness breed, so has the great seat of Scotch manufactures developed the Ayrshire. The Yorkshire dairy cow is just an Ayrshire on a large scale. All the essential points of the animal are similar. The fine neck, light fore-quarter, deep rib, thin skin, lean back, good udder. Even the colour is very much the same, but there is a considerable difference in size. These dairy breeds, and, in fact, most great milking animals, are distinguished by having a lightness of fore-quarter, a sharpness at the top of the shoulder, with rather a small girth round the heart, and a general leanness along the back. Now these features are disapproved of in a feeding animal, and the question is, can we get rid of these features without damage to the milk? can we get a right development of forequarter and a good girth round the heart in a first-rate dairy cow, or are the two things incompatible? I think the evidence I have adduced in the course of this lecture is sufficient to encourage us to attempt it, and to make us hope that we shall eventually succeed in uniting good feeding and growing properties with first-rate qualifications for the dairy.

THE OPENING OF THE FOREIGN CATTLE MARKET.

The new foreign cattle market, erected by the Corporation of London on the site of Deptford Dockyard, was formally opened on Thursday, Dec. 28. It had been decided that there should be no ceremony on the occasion, and the proceedings were of the plainest and most unostentatious character.

The Lord Mayor and Mr. Sheriff Bennett, accompanied by the comptroller and several members of the corporation, proceeded to the market about half-past nine o'clock, and were received by the Markets Committee, headed by their chairman, Mr. J. F. Bontems, the City architect, Mr. Horace Jones, and by the superintendent, Mr. Philcox. They were then shown over the market, which the Lord Mayor thereafter declared to be open. The market has been constructed under the powers and provisions of the Contagious Diseases (Animals) Act, 1869, for the sale and slaughter of foreign animals arriving in

this country, with a view to prevent the introduction and spread of infection. The site and certain buildings upon it were purchased for £91,640, and designs for the market having been supplied by the City architect, the work has been completed in the short space of six months. The process has not been one entirely of construction, the committee having, to a large extent, availed themselves of the erections that they found upon the site by adapting them to the purposes to which they are henceforth to be applied. The "slips" were filled up with rubbish excavated from the site of the New Law Courts and soil dredged from the bed of the river, and wooden sides having been fitted to the lofty roofs that covered the docks, they have been converted into well lighted and ventilated sheds. From each of these (three in number) a pier stretches out into the river, and as there is a depth of 12 or

13 feet of water at low tide, vessels can lie alongside and discharge their cargo at any time. Lairage accommodation has been provided in the sheds, the Admiralty store-shops have been converted into slaughter-houses, and the old spar sheds are now to be used as fodder-houses. All animals imported will be inspected by a resident veterinary staff, and in the event of disease being discovered the pier where the animals are landing and the shed from which it abuts will be kept isolated. An ingenious provision has been made for the destruction of infected animals. The carcass is hoisted into a cylinder, having the appearance of an immense boiler set on end, and there, by a strong application of steam, it is thoroughly disinfected, so that the fat and other parts may be devoted to any purpose for which they are fit. There are both wooden and iron pens, some of the latter fitted with folding hay-racks, and others with iron cradles suspended from pulleys that may be raised at pleasure, leaving the pens clear. The water-troughs will be kept constantly supplied with water by a self-acting process. Accommodation has been provided for 3,000 cattle and 11,500 sheep, allowing 30 feet superficial for each of the cattle and 5 feet for each of the sheep, but in case of emergency 22 feet can be made to do for cattle and 4 feet for sheep, so that upwards of 5,000 cattle and 14,000 sheep can be received. The slaughter-houses are fitted with machinery of a novel character, suggested by Mr. Rudkin and Mr. Brewster, members of the Markets Committee. After a bullock has been killed and dressed it is raised by a hand winch to a couple of hooks that traverse parallel rails running from end to end of the shop, and from these beams the carcass is lowered by means of pulleys. The work can thus be carried out in a very expeditious manner. The slaughter-houses for sheep are also appropriately fitted. The whole of the sewage, it may be stated, after being disinfected, will be taken away in carts or barges, there being no underground sewage works. The total estimated cost of the market is £210,000; of that the site absorbs £95,000. A sum of £18,000 has been put down for lairage, £15,000 for piers, £15,000 for slaughter-houses, £18,150 for miscellaneous purposes, and £18,350 for contingencies. The market days are Mondays and Thursdays, and the hour of commencing ten o'clock. A portion of a monastery, built of red brick, that once stood upon the site, still remains, and bears the date "1513." The inspection of the market having been concluded,

Mr. BONTEMS said—My Lord Mayor and gentlemen, the markets committee give you a cordial welcome to this, the scene of their recent labours, and some of you know how difficult those labours have been; to select a site for a market amid so many conflicting interests, and to construct that market at the expense of one public body, subject to the approval of another, and to do so with no definite idea of the amount of accommodation that would be required, was no easy task. But it is not for us to speak to-day so much of the past as of the present. I may say in passing, as a statement has been made, or, if not a statement, an insinuation, that considerable delays have occurred, that the fault of that cannot be placed either to the credit of the markets committee or to the corporation. My Lord Mayor, the time has now arrived when this work should be dedicated to the public, and the committee felt that no one could be asked with so much propriety to open the market as your lordship. You are the honoured and respected chief of the great municipal body at whose expense the market has been constructed, and therefore it was considered that you, as Lord Mayor of London, should declare the market to be open. But, before I ask you to perform that ceremony, perhaps you will allow me to say a word with respect to the market itself. As to the site, it is one possessing considerable historical interest. It has been appropriated to some of the most useful purposes to which national property could be appropriated. As the site of a monastery ages ago, it was the fountain from which the learning and religion of that day spread amongst the surrounding population, and even to the metropolis itself. Since then, as the place where some of our best ships have been built, it has contributed to the defence of the country, and, contiguous as it is to the palace at Greenwich, one cannot help calling to mind the event which took place in the reign of Queen Elizabeth, when the whole mind of the country was devoted to the question of national defence by means of ships, probably built on the spot. In the adjoining shed the celebrated Czar of Russia, Peter the Great, worked as a ship carpenter, little thinking it would one day be

devoted to the sale of cattle imported from Russian dominions. Perhaps it may be considered that the site is to be appropriated to a purpose inferior to that to which it has hitherto been applied, but, after all, the supply of animal food to the constantly increasing population of London is a matter of no small concern. Therefore, I consider the site will be still honoured in being used for the benefit of the public. Consider the area—22 acres of land; sufficient not only to provide accommodation for the present wants of the foreign cattle trade, but to meet any prospective requirements. Then look at its river frontage, of nearly 1,100 feet; there was no other site within easy access that presented so desirable a frontage. Then look at the landing facilities, the facility for landing at all stages of the tide, both at the highest and lowest, so that the cattle ships will not be detained with their cargoes. Then the large quantity of useful buildings found on the site. These sheds were all covered in ready for our purpose. We had an expensive and troublesome work in filling in the docks, but see what elegant and commodious sheds are made by appropriating them. A new shed made next to this, and which, as you observe, has a low roof, is not nearly so commodious in its appearance as these larger sheds that were ready to our hands. The houses surrounding the yard are all appropriated for distinct purposes, some for the use of the bankers connected with the market and some for the Government officers, and also for our own officers. We shall be able to fill all the houses, and there will be in them sufficient accommodation for all. As to the position of the market, objection had been made that it was not on the north side of the river, but I think a little consideration will convince us it is not undesirable to have a large market on the south side of the river. The population on the south side is one-third of that of the metropolis, and as the other side has a large market for live animals and another for meat, it may not be considered undesirable to have the new market on the south side. Well, then, as to its construction. You have seen the noble piers, which I consider do credit to the gentleman who has built them and the engineer who contrived them. They are built substantially and plainly, and are exceedingly well adapted for the purpose to which they are to be applied. The sheds have been converted into lairs by the enterprising builders, Messrs. Browne and Robinson, under the superintendence of Mr. Jones, our own City architect. But I must tell you that we are very much indebted for the arrangement of the lairs to two gentlemen, both members of the markets committee, who have taken a very anxious and useful part in the construction of the market. I can hardly tell you how much the committee is indebted to Mr. Rudkin and Mr. Brewster for the great trouble and pains they have expended on the market. I am sure they have passed many anxious, if not sleepless, nights in considering the various arrangements that it was necessary to make, which those only acquainted with the requirements of a market could comprehend or carry out. Then I may tell you that ample provision has been made for the cleansing, drainage, ventilation, lighting, and water supply of the market. As to the amount of accommodation, it is so great that those connected with the cattle trade are surprised we should have been called upon to provide so much accommodation. For the slaughter-houses we have a hot water supply, and the machinery includes what is called a "diger" for infected animals. A whole bullock may be placed in it, and, by means of steam at a high temperature, the infection is very soon destroyed, and the fat and the remains of the animal are taken out free from all infection and ready to be applied to any purpose for which they are fit. It is only fair to the vice-president and officers of the Privy Council to say that they have been most anxious to make provision for the disinfection of animals. They have done their very utmost to explain to the markets committee the means by which infection might be prevented from spreading, and I need not tell you the markets committee have only been too ready to carry out their wishes, so that this market may be as perfect in that respect as it is possible to make it. A comparison has been drawn between this market and its landing and lairage accommodation with other places used as markets on the north side; but persons who have seen those places and who have seen this market and all its provisions do not require to be told that there is no comparison between this market and any other place. You might as well compare Regent-street with Rag-fair as this market with any other place. One or two objections have been made to some of the arrangements. It has been said

the time for holding the market (ten o'clock) is not a convenient time. That hour was selected at the express suggestion of gentlemen connected with the trade. It appears to me the arrangement is the best that could be made to prevent contagion by using the two markets, because if a salesman goes to Islington the first thing on Monday morning, and comes here afterwards, he cannot take the contagion from here to the Islington Market, although he may bring it from the Islington Market to this one. We have given the longest time for the disinfection of persons going from one market to another that it is possible to give. Then it has been objected that there was railway accommodation on the north side of the river, and not on this. It so happens that there is not railway accommodation on the other side, and the facilities for making railway accommodation are greater on this side than the other. Moreover, this market is nearer the City than any other site that could have been selected, and that would have been at all appropriate for such a market. As to the question of nuisance to the neighbourhood, I am quite sure the people of Deptford may be satisfied on that score. Such care has been taken for carrying away anything that could cause impurity to the air, that certainly the health of the neighbourhood will not be diminished. It only remains for me to thank your lordship for complying with the request of the committee to be here to-day, and also to thank the gentlemen present for their attendance, and to express a hope that this market may by its management be a credit to the corporation and a blessing to the people.

The LORD MAYOR, in declaring the market open, said: Mr. Chairman and gentlemen, I feel, I assure you, very much gratified in being allowed to take part in what I consider a most important affair. The inaugurating of a market of this character is a great honour. It will prove to be one amongst

the many works in which the corporation have been engaged, and which they have carried through and completed so much to the satisfaction of the public. Your chairman has certainly delivered a most interesting speech connected with the details of this gigantic work, for it is gigantic. I have felt very much gratified with those portions of the market I have seen. I have been very much struck with the solid way in which everything has been constructed, and there is one matter especially pleasing to my mind—there is no evidence of extravagance or unnecessary ornamentation in what I have seen. I think great care has been taken, and it is not surprising that great care should have been taken, because the members of the markets committee are men of experience. They have brought to bear a large amount of intelligence, and it is evident that everything has been done to promote the comfort of those who will come here to deal in cattle. With regard to its being a great boon to London, there can be no question. A market for foreign cattle has long been a matter of necessity, and although great difficulties arose both with the Government as well as with the corporation and the Board of Works, all those difficulties have been cleared away, and I think the corporation were fortunate in securing this site. It would have been impossible to find an area nearer to London with all the conveniences this one possesses. In now declaring this market to be open, I hope and trust it will be successful in every way, and if we can by its means induce foreigners to fatten and send their cattle here, so that we may obtain a reduction of the very high prices we have been paying for animal food, it will be a great boon. I trust it will be a great success, and I have much pleasure in declaring it to be open.

At the request of the Lord Mayor, three cheers were given for the success of the market.

THE SUPPLY OF AGRICULTURAL LABOUR.

At a meeting of the West Suffolk Chamber of Agriculture at Bury St. Edmund's, the president, Lieut.-Col. F. M. Wilson, in the chair, the subject for discussion was "The supply of agricultural labour with reference to the classification of wages."

Captain HORTON, R.N., said this question was one of high national importance. It was in fact no less than this, "How shall we best succeed in maintaining a supply of labour suitable to meet the present requirements of agriculture." This problem had to be solved in the face of the fact that the conditions of labour in all branches of industry were undergoing great and constant disturbance, and that they had already to deal with a generation of labourers much better instructed, and as a consequence more restless than heretofore. His (Capt. Horton's) career in the navy had afforded him some opportunity of arriving at certain conclusions with reference to the subject. Both the Army and Navy offered some features suggestive of example not unworthy of imitation elsewhere. The analogy of husbandry with the army and navy existed only in so far as the extent of the work to be performed, for the organization of agricultural labour seemed to be in no degree equal to the demand for it. A farmer had under him, perhaps, a bailiff, then a waggoner, shepherd, stockman, and those who work immediately under them, with certain other men and boys not in constant work and apt to be paid off during many consecutive weeks at different seasons. Happily this state of things had been in a great degree modified through the introduction of machinery; but it was important to consider how it might be still further improved, and the employment of labour become more uniform throughout the year. He pointed out the evils which result from men having uncertain work, and proceeded to compare those engaged in agricultural labour with the same class enlisted in the army or brought up in the navy. Taking the average wages (including hayseed, harvest, &c.) of agricultural labourers to be 16s. a week, as had been stated by a gentleman who had been at pains to calculate it, he said the corresponding money value in the navy was represented by an able seaman of the first class. This man, for misconduct, might be reduced to the second class. Below the A.B.'s

were the ordinary seaman whose wages were about £4 a year less, and who were also divided into two classes, and then the boys, who form two classes according to their age. A somewhat analogous classification existed in the army. He classed the waggoners, shepherds, cowmen, and engine-drivers as corresponding with able seamen or private soldiers of the first class, and the men next them in each department ready to supply their places with the second class, whilst the third class might be made to include all the remaining bone and sinew of 15 years old and upwards. Lads of less age might also be classed as boys of the first and second class. Very great advantage would accrue both to employers of labour and those they employed, if the farmers were to adopt a system of engagement, whereby they should have in their power to stimulate and reward the better energies by advancement in grade and wages. The same system would also strengthen their hands with reference to their less industrious labourers by enabling them to reduce their grade for continued dereliction of duty. By this means the farmer could from week to week impose a fine upon his men if they failed in their duty or engagements, while he must impose upon himself a sense of the duty which would attach to him of conferring the rewards upon deserving men without delay, as well as that of administering the penalties in strict justice and apart from the influence of any momentary irritation. How many a man was now turned off a farm almost without a hearing because his master had no other means at hand to punish him! and on the other hand how many a valuable man was induced to quit his parish and seek work elsewhere because he found his family increasing while he had no prospect of improving his condition so as to be able to maintain his position. The system he proposed would offer great facilities for the adoption of piece work. If the system were adopted in a district there would follow a system of certificates of service to the men in each class which would facilitate their employment by other masters, and he advocated the establishment of a kind of labour office after the manner of a domestic servants' registry. Among the advantages of such a labour office he mentioned that it only required that

some facility of intercourse should be established for a more regular distribution and employment of labour to ensue, and he gave an instance which showed the small amount of regard which men bestow upon the distance they have to go to work. Captain Horton then made somewhat lengthy quotations from the paper of Mr. J. Dent Dent, M.P., on 'The Present Condition of the English Agricultural Labourer, in the *Royal Agricultural Society's Journal*, and on the question of the employment of women in agriculture said he did not hesitate to state it was his opinion that they would do wisely to encourage the employment of female gangs according to the provisions of the Act to assist in getting some of the thistles out of the land. In conclusion, he said personal activity and quickness of movement on the part of the labourer were qualities valuable to his employer. They required cultivation in youth as much as maintenance during manhood. This was a difficult matter, but well-shod children taught to use their limbs with activity were all the more likely to prove useful labourers under a system of payment, which by the promotion or reduction of a labourer's class and position on the farm would cultivate in the minds of the men the sentiment of self-respect which was an agent far more powerful than money. Those were wise words of Lord Treasurer Burleigh's to his son—"Keep rather two too few than one too many. Feed them well and pay them with the most, and then mayest thou boldly require service at their hands."

The CHAIRMAN said Captain Horton had very wisely not gone into the general question of the price of labour; for however much they might wish to pay the agricultural labourer much more than they did, it was very questionable whether the farmer could afford to give higher wages—unless he could get a more skilled labourer to do more valuable work. With the exception of the present year, mixed soil and light land farms had had a very hard time of it lately, and more money had been lost than made upon them. He reminded them that wages must be to a great extent governed by the law of supply and demand. After a reference to piece work the chairman touched on the question of the labourer keeping a cow. No doubt nothing was so good for rearing children as milk, but he did not hold with the labourer keeping a cow, thinking it much better that the employer should sell him the milk. For a labourer to own a cow was putting too many eggs into one basket—the man's whole capital would be invested in it, and if the cow died he lost all, and then he would be going round with a brief for subscriptions.

Mr. F. PAINE (Barton) read a paper on the subject, in which he said there was no doubt a good and cogent argument against the almost universal custom in that neighbourhood of paying by the day instead of by the piece, and pointed out that under the existing system there was no encouragement for the really superior man to show his full value. This state of things had been brought about by several causes, one great reason being the excess of labour, which had induced farmers, in order to keep the men generally employed, to pay low wages by the day rather than have the same work done on the piece, which would have enabled some to earn better wages, whilst the less competent men would have got little or nothing at all. Such a system must be wrong. Somehow farmers had more incentives to employ labour than other industries, for a farmer was sometimes induced to employ more hands than he really wanted rather than let them go to the union, where he would have to help to support them, whilst other employers were actuated by no such motives. He alluded to the great change which had been effected in farm work by the introduction of machinery, and expressed his strong opinion that one thing which would raise the condition of the agricultural labourer was better education. His paucity for the poor man was increased knowledge, and gentlemen who were anxious to raise the agricultural labourer could do it in no way so effectually as by using every lawful means to compel the education of poor children. It might not bear fruit in their own time, but it certainly would in the next generation. Education would lead to independence; for it was only the truly ignorant who would consent to be as it were crushed to the earth. Give a man half an education and he would thirst for more knowledge and independence. And what applied to the individual applied to the nation—the better the people of any country were educated so much the more firmly was the independence of that nation secured.

Rev. T. E. ABRAHAM thought it desirable that they should

take some steps to improve the condition of the labourer before they were compelled of necessity to do so, and before any pressure was brought to bear on them. The agitation for shortened hours of labour was not likely to affect agriculture, but the question of the rate of wages must be looked in the face—it would come before long, and would it not be better to anticipate it rather than wait till their population was entirely drawn off? That they were flocking out of that part of Suffolk there could be no question, and he was not at all sure that the employer would lose by an increase of the wages; if they could get a better, more industrious, better-fed, more contented man it would be a necessity for the employer to give better wages. He believed five industrious, contented labourers at 12s. a week would do more work than six men at 10s. a week. He called attention to an Act of Parliament passed early in the reign of William IV. which enabled trustees of "fire" allotments to give portions of the allotments to industrious men of good character. This, if carried out would be of very great advantage, and he further enlarged upon the desirability of the labourer having a good cottage. He hoped a law would be passed reducing the number of publichouses, and the hours during which they were open, and he believed improved education would tend to give a more contented and provident race of labourers.

Mr. G. GAYFORD admitted that it would be extremely advantageous to have such a classification of labour as Captain Horton had suggested; for how was it possible for a good man to avoid feeling his energies damped if he received no more money than a man whom he knew to be much inferior to himself. Wages must depend on supply and demand, and he was not so sorry as some to see men leave the district; because if there was a surplus of labour, and the men could better themselves by going elsewhere, it was desirable that they should go. One great want was a more equal distribution of labour, and in proof of this he showed that in the parish of Ingham the proportion was $\frac{7}{10}$ acres to each individual; in Honington it was 3 acres; in Risby, $6\frac{1}{2}$ acres; in Great Saxham, 5; in Little Saxham, 8 acres; in Deunham, 6; whilst in Barrow it was only 2 acres to each inhabitant. The consequence was that farmers in the parishes round Barrow employed Barrow men at certain seasons when they wanted extra labour, and as soon as they had done with them sent them back to Barrow. Every landlord ought to be willing to supply each farm with a good number of comfortable cottages. No gentleman would think of letting a farm without a stable to put the horses in, or without a sty to put the pigs in, and why should they let a farm without cottages to put the labourers in?

Mr. MANFIELD believed the labourer was never so well off as now, for he was better paid, clothed, and housed than formerly. As to classification of labour, it appeared to him that they had it already, the first class consisting of horsemen, shepherds, stockmen, and engineers, who were paid higher wages than the ordinary labourer. In the second class were all the ordinary run of labourers, good, bad, and indifferent, all paid at one price, which was a very bad arrangement. He advocated doing all the work by the piece that could be so done. As to the supply of labour, he denied that it was short. One objection to a classification was that there were times of the year and kinds of work at which the best man would be worth no more than the inferior, and if he did not pay the inferior man at the same rate as the superior, the former would not stop with him.

Mr. J. S. PHILLIPS objected to piece-work because it implied a want of confidence between the employer and the employed. As to shepherds, horsemen, &c., being paid higher wages, he asked if their hours were not much longer.

Mr. PAINE: They do seven days' work instead of six.

Mr. HUNTER RODWELL admitted the desirability of a classification of labour, but confessed his inability to see how it was to be carried out further than it already was by paying extra wages to horse-keepers and shepherds, who, though they did more work, had the advantage of constant work, whether wet or dry, to the thatcher, the drill-man, and the engine-driver. Any gentleman who could suggest a mode by which a classification could be carried out would be a benefactor to both the farmer and labourer. Mr. Gayford had spoken about landlords building cottages, but he would suggest to that gentleman to recommend the Barrow people to pull down a few of theirs.

Rev. C. W. JONES (Pakenham) thought one classification operated most injuriously—that by which a man was treated as a boy till he married, and which never gave him full wages till he married. (Strong expressions of dissent.)

The CHAIRMAN hoped two statements which had been made would not go forth as the opinion of the Chamber. Great stress was laid by one gentleman on the circumstance that by improving cottages and giving allotments they would render the labourer more contented, and he wished to guard against an impression being created that this Chamber considered the agricultural labourer discontented. Another gentleman said that none but the ignorant and uneducated men would be crushed to the earth, and he should not like it to go forth

that the Chamber was of opinion that the labourer was crushed. That gentleman advocated increased knowledge, and he asked whether education was not spreading, and whether there was not every prospect that it would spread more and more? As to the cottages, he agreed with Mr. Gayford, but there had been an improvement in that respect, and though he disliked to allude to anything personal, he believed there were cottages enough on the land he owned, and to every one was attached a garden or an allotment.

Captain HORTON having briefly replied, a vote of thanks was passed to him, and a similar compliment to the Chairman closed the proceedings.

THE IXWORTH FARMERS' CLUB.

LABOURERS' DAUGHTERS.

At the last meeting, the subject was The Education of the Daughters of Agricultural Labourers. The chair was taken by the President of the Club, Mr. Edward Greene, M.P.

Mr. GEORGE GAYFORD, jun., said that up to the present their attention had not been specially directed to the improvement and encouragement of the female members of the labourer's family, and he thought that in no way could this be done more effectually than by directing attention to, and proficiency in, the performance of such plain, practical duties of every-day life as would tend to make them good servants, wives, and mothers. He had used the plain old-fashioned word teaching, as he did not wish to enter into the general question of education, preferring to leave that in better hands. They might compare the teaching of a child to the rearing of a building—both required a sound and good foundation. How were children to stand the trials and troubles to which they would be exposed, unless a good foundation was early laid by practical and judicious teaching? He would not enter into the question of whether the present system of education was right or wrong; but he would say, without going into such questions as that, it appeared to him that it was their duty to endeavour to lay a sound, solid foundation by trying to teach and encourage those plain duties of every-day life which they knew must be well performed by the wife, if a man's house was to be made comfortable and happy. It appeared to him that this part of the teaching of the daughters of agricultural labourers had been, and still was to a certain extent overlooked; and he thought they would all see there was an increasing tendency to allow a regard for mere outward show and fashion to take the place of utility and comfort. After stating that this was his reason for bringing the subject forward, Mr. Gayford proceeded to say: Two men may be living under the same roof whose circumstances shall in all respects be similar—the family of the one will always appear tidy, comfortable, and well fed; the other, ragged, uncomfortable, and half-starved; and often because the one has a tidy, careful, and industrious wife, who has been well taught, knows the value of time, and how to make the best of her small income, while the wife of the other, who may have been, perhaps, a more showy and fine-dressing girl, is, from the neglect of good training in early life, destitute of those qualities, and that useful knowledge possessed by her neighbour. Now, whenever the latter state of things prevails, can we expect good conduct and industry in the husband who is neither a contented nor a happy man; and if we can do anything towards rendering such a state of things less frequent, we shall not only benefit the labouring man but society generally. And how is this to be done? I think in a very simple way, by taking for our guide that Book which should be the foundation of all teaching, in which we are told to do our duty towards God and towards our neighbour. The public instruction in the first of these duties we may leave to those whose special mission it is to teach it; but the second, I think, comes quite within our province, and we are plainly told that our duty to our neighbour is to learn and labour truly to get our own living, and to do our duty in that state of life to which it may please God to call us. And I say that if the teaching of these plain truths is in any way neglected, and is not constantly impressed upon the minds of the young, all

other education will lose much of its value; and I fear that all education bills, school boards, certificated teachers, and government inspectors, will be of but little use, and will fail in producing the good effects anticipated by their advocates. If you, gentlemen, consider it desirable that we should encourage such a system of teaching as I am in favour of, I would respectfully suggest that we should appropriate from our funds such a sum as we can spare to be devoted to giving prizes to the daughters of agricultural labourers, for skill in bread-making, plain sewing, mending clothes and stockings, knitting, or any other branch of industry likely to be useful to them, or for any special cases of merit or good conduct brought before us. In conclusion, if there should be any person to whom this appears a trifling and unimportant matter, I would remind them that history tells us that woman's influence has always to a great extent swayed the destiny of mankind in all parts of the world, and we know it is still the case, and it is right that it should be so, provided that their influence is properly exercised, and confined within fair and legitimate limits; and I would also remind them that many of our greatest and best men, some of whom have risen from the lower classes, have recorded their conviction that they owed their success in life in a great measure to the teaching of a good wise mother. And again, I would ask them if they do not feel and know that whatever there may be of good in them is mainly to be traced to a mother's teaching and example, and that the evil or wrong in their natures has been more checked and overcome by the influence or the memory of a mother than by any other means. And, gentlemen, this influence pervades all classes of society; therefore I do feel that if we can do anything to raise the standard of excellence and usefulness in the daughters of the agricultural labourers, our discussion will not have been in vain, and we may possibly lay the foundation of much present happiness and much future good.

Mr. R. GREEN (Schoolmaster, Ixworth) also read a paper on the same subject. He said there could be no subject so desirable for discussion at their meetings as the education of the labouring poor, and in his opinion, more especially, the education of the daughters. It was from the class of the daughters of labourers that their servants came, and who, as such, might exercise an influence for good or for evil over their children, and who would also, after their own marriage as mothers, rule the future generations of their class. They (the farmers) of all classes knew that good fruit would not come of its own accord, their experience had told them that as much attention need be paid to the growing as to the ripening season, and he would ask them if they had hitherto taken any interest in the training of young girls. And they ever thought the education of the agricultural poor a matter for their own consideration and benefit? Mr. Green then went on to say: In my opinion the great root of the evil, in many parishes, is the want of proper accommodation in the cottages of the poor. What is the use of talking about decency and respectful conduct to a girl who has passed most of her young life in a sleeping-room with men and boys? What is the use of teaching morality while such a state of things is allowed to exist? But it is said, "We know it, and are sorry for it, but we cannot help it." I ask, "Do you try?" Many, by impatience, get even more than they expect. Why should not

every farmer say to his landlord, "I can employ so many men; build me up as many good cottages, and let me hire them with the farm, so that I may have some influence over my workmen?" Such a system, carried out properly, would be a great help to destroy the present state of things in over-crowded cottages, and, under the management of the farmer and his wife, there might be a special interest taken and an assistance given to remove what may be called the next great evil and hindrance to education: I mean, the want of moral control at home. I don't want to see our labourers treated as serfs or slaves, but I think in some cases a little judicious compulsion may be made use of in this great failing, with great benefit to both parents and children. Among the labouring poor, the parents seem to lose all moral control over their children about the age of 9 or ten years. "Forced prayers," it is said, "are not good for the soul," but I have seen, in parishes where the Squire's Lady had absolute control, better servants and better mothers, than those produced from parishes where everybody does that which seemeth right in their own eyes—in parishes where this one lady is not. Why should not the employers of labour use their influence to incline the parents to more careful training, and the children to understand the necessity of obedience. This kind of aid would greatly help, if not entirely effect a remedy. Should they refuse to accept these kindnesses, then, I say, put in a little sugar and force the medicine down their throats. The next obstruction to a pure education is the cheap and easy means of obtaining finery in dress. Oh! for the days of neat white caps and sensible-sized aprons, instead of the make-believe things worn by servants in these days. This is a very difficult and a delicate question, but I cannot help saying that example is better than precept, and when we see well-educated young ladies with their Alexandrian limbs and Grecian bends, why need we be astonished at ignorance among the maids and dress of its superiors. One thing I would strongly impress upon ladies if they were here present; never give away anything to poor girls which may be converted into useless finery. If they give, let it be something neat and useful. I now come to the last but not the least of those things which militate against the education we all so much desire—the present system of Government education. How can it be expected that the teachers should take the same interest in teaching the heart when their employers and paymasters, the Committee of Council, ignore that King of teaching? Is it not natural that they should attend most to that which brings in the needful to support them? Is it right that a nation should support such men as say to a girl (in effect if not in words), "I care not whether you are taught the religion of your Saviour or not, but at 10 years of age I expect you shall be able to manipulate perfectly all the questions which may be put in our puzzling weights and measures"? Is it fair to tell the schoolmistress, "You must teach needlework in the afternoon, but you shall also bring your girls up to the standard of the boys at the same age, or you shall be plucked"? In other words, "You shall perform your tale of bricks, but you shall have no straw." I tell you honestly the Government system, according to the hard and fast line, by age standards, is nothing but a system of cram, and will never, as a rule, produce what is most wanted. It is all artificial and on the surface, producing contempt for hard work, and a conceited superiority over one's neighbours. In his concluding remarks Mr. Green alluded to the fact that Lady Hoste was alive to the necessities of the Ixworth school, and had provided calico and other materials to be made by the girls into garments, which were to be sold at cost price to the poor.

Mr. FISON said he thought they should begin at the beginning, and that was to improve the dwellings of the labourers. He quite agreed with Mr. Gayford's suggestion that prizes should be given for useful work.

Mr. GOLDSMITH said he should like to go back to the times when farmers' wives and daughters did work. He believed they wanted, in the first instance, to go higher than the labourers' daughters. They wanted to see that the farmers' wives and daughters understood these things. Good servants they could not now expect to find; they were not taught.

Dr. SHORT said he should like to ask the farmers present whether they thought that wives had not, years ago, more influence over the children than they had now. He was a young man, but he could remember that when he was a boy children were more obedient to their parents than they were now. It was astonishing on going into cottages to hear the

impudent remarks that children made to their parents. His experience was not great in the matter of servants, but if they got them they were not what servants were years ago. He did not think the influence of the parents were so much exercised as it used to be. The children grew up giddy, thoughtless, and unfit for the state of life into which they were called.

Mr. H. TAYLOR thought a very great source of the evil was the employment of females in agricultural labour. He had witnessed young females and old ones too, as it were, half-unsexed, employed in labour in the fields, and they were by no means pleasant sights to the eye. But he had witnessed such sights, and he must say that he had considered them as highly out of place. They expected to get their servants from the daughters of agricultural labourers, and what was the consequence? They were led to adopt for themselves the more fascinating occupation of agricultural labour. A girl went to work in the fields, and paid no regard to the preservation of her character. If she lost her character as a domestic servant there were the fields to resort to. He said that the amount of iniquity was very great as regarded that indiscriminate grouping together of females in agricultural labour. He questioned very much whether there was the same amount of innocence and harmlessness now that there was in the days when Phillis and Corydon courted together. He believed that there was more prostitution and more illegitimacy caused through that system than any other. He left primary education in the hands of others. He believed it had been the subject of such diversity of opinion that he would leave it. He merely referred to the other subject, which he considered an important one. He thought that if farmers would really refuse to employ females they would be obliged to devote themselves and employ their energies in other things, and they would get better servants, better wives, and better mothers. The wives now not only neglected their husbands, but also their children. He had known instances in which children had been locked up in the house whilst their mothers were gone to work in the fields. There they came to all sorts of grief and harm, and besides, the household duties were neglected.

Mr. MANFIELD could not agree with Mr. Green, that the present defective cottage accommodation was easily remedied. How was it to be done in a place like Ixworth? The owners would not do it. He thought they must all agree that the daughters of agricultural labourers required such an education as would fit them for after life. They must, at least, be good sempstresses, and possess the qualification for good domestic servants. He entirely disagreed with Mr. Taylor's remarks as to the employment of women in agriculture, and quoted Mr. C. S. Read's opinion in support of his argument.

Dr. SHORT stated that he could speak from his experience of the parishes in which he was poor-law medical officer, that the women who went out to work in the fields were the most untidy, and their homes the most uncomfortable. In seven out of eight cases, where the women worked out, this was so.

Mr. FISON disclaimed the idea that seemed to prevail amongst the speakers, that it was a general thing to employ mothers of families in the fields. It was the exception rather than the rule.

Mr. F. GAYFORD said women did not go out so much now as they did. They had not half-a-dozen women, out of a population of 350, who would go into the fields to work. If he now wanted female labour, he was told the women did not go out to work. He agreed with Dr. Short's remarks, that the homes of women who went out to work must be neglected.

Mr. MANFIELD asked if the opponents of female labour objected to gleaming? He said if field labour did not hurt them then, it could not at any other time.

Mr. TAYLOR rejoined that his argument was that the supply of domestic servants was bad. They expected labourers' daughters to be practically educated, and he asked how that could be done in the fields.

Mr. S. W. HUNT, the Vice-Chairman, said he recollected when he was a boy that girls used to go into the fields, and used to do a great deal more labour than they did now. Servants of that day were a different class of people from what they were at present. Farmers' wives and daughters did not mind work, but at the present time the question was whether they could get servants to work. What he maintained was this: unless the mistress of a household knew how to set a servant to work, they could not expect to get a

good servant. He thought that if they had more milk pails and fewer music stools, they would be better off. Speaking of what had been said as regarded immorality, he said there was not so much immorality in the country as there was in towns. A town was the hot-bed of immorality, the hot-bed of illegitimacy, and statistics would bear that out.

Mr. BOORY said he could not agree with all Mr. Hunt had said. That gentleman seemed to think that farmers' wives were to supply all the servants that were wanted in the country, and that tradesmen's wives should know nothing but how to please their husbands.

Mr. GAYFORD, in reply, suggested that many persons might do good in taking a little girl into the house to assist the other servants, so that she learnt a little from all, and was trained to be a very useful servant in that way. To show that there was something in it, he was prepared—if the Club would give a guinea, for a medal or something of the kind—he would give a five guinea cup to the daughter of the farmer of about 150 to 200 acres who made the best pound of butter or the best loaf of bread. Let it be kept by the winner who took it three years in succession, and let the winner at the time have also a medal or something to commemorate the event. He thought that was most important to young farmers. Perhaps when the first cup was won some gentleman would give another.

The VICE-CHAIRMAN said he should be very happy to give the second cup then.

Mr. G. GAYFORD, alluding again to the question of field labour, said the mothers of very small children must lose more than they got by going out to work. Mothers, again, did not teach their children well by stopping at home, doing all the household work, and letting the children go out into the fields. He should like, before they left the room that evening, that they should arrive at some decision—whether they could devote anything from the funds of the Club to the object. If they could not do it in that way they might invite the ladies to co-operate with them, and ask them to form a committee amongst themselves. They might form a sort of auxiliary committee, and take an example from the one now existing. It was time something was done.

The CHAIRMAN thanked Mr. Gayford from the bottom of his heart for having brought that question forward. He (the Chairman) believed there could be no sound state of society without a religious basis. The labouring classes should be provided with proper dwellings. He considered that every one who had a young girl as servant, had a trust committed to him, and was bound to do his best to see the girl properly trained, and not look upon a girl as a mere machine out of which they should get the most work they could. Having alluded to home comfort as a necessity for the labourer as much as any one else, the Chairman proceeded to say that the present settlement of the education question was a mistake. Education without religion was like a ship without a rudder. They had heard a great deal of the want of parental control. They knew that boys must go early to work. It was essential that they did so. It would be impossible for the parents to support all their children unless they went to labour. As soon as they earned about an equivalent to their board they

began to be very independent. That was not confined to the agricultural classes. It was the same in higher classes. A young man did not call his father his "father," but he called him his "governor" (laughter). They all knew that from the age of 13 to 14, when the boy went to earn wages, he was under no control. It was very often the case that on Sundays they went to no place of worship at all. They met them in twos, and threes, and fours and fives, standing about as idlers, and so they went on, till they were grown up or got married and settled. They ought to do their best to put them in the right path, and if they were put in the right path when they were about 20 or 21, there was every prospect of their going right. To go back to what was the object of their meeting—the question of teaching girls. Women did not go to work as they used to do; there were more demanded for good servants. This was only to be done by each person who felt a responsibility endeavouring to teach them. They could not expect that without good teaching they would be capable of fulfilling the duties. He hated pauperism. He hated helping people who would not help themselves. Let them not turn their backs upon those who had fallen into error. Let them try them again. He had known many a generous heart beat under such a breast. As they would hope to be tried themselves let them try others; try them again and again, and then there might come a time when they might see that it was really useless to help them. But let them not turn their backs upon them the first time.

Mr. GAYFORD, in answer to the Chairman as to some practical means of carrying out what he had spoken of, suggested that in class 1 they should offer a prize for the best shirt made by a girl above fourteen and under fifteen—say three prizes of 15s., 10s., and 6s. In the second class let the girl be under fourteen, and give the same prizes. In class 3 he proposed to embrace clothes-mending and darning of stockings, giving as prizes 10s., 7s. 6d., and 5s. Darning he took to be a most important matter. He knew of nothing more uncomfortable than wearing badly darned stockings. The candidates, he suggested, should all be recommended by a member of the club, and should produce a certificate from the mistress, the minister of the parish, or the wife or daughter of some member, setting forth that the work was done in the presence of the parties recommending, or at least that they believed it to be all the candidate's work.

On the suggestion of the Chairman, the subject was referred to the committee to consider, after it had been suggested that the club should find materials, a suggestion, however, that did not find favour.

Mr. MANFIELD suggested that prizes should be given to domestic servants. He thought that must have escaped Mr. Gayford's attention. He would propose a vote of thanks to Mr. Gayford for his paper.

Mr. FISON seconded it.

Mr. GAYFORD, alluding to the offering of prizes to domestic servants, said he had not forgotten it, but he did not consider that it came within the province of their discussion. That would be for a future time.

A vote of thanks to the Chairman closed the proceedings.

NEWCASTLE FARMERS' CLUB.

THE RELATION OF SCIENCE TO AGRICULTURE.

At the last meeting, Mr. G. H. Ramsay in the chair, Mr. STOCKLEY read the following paper:

It has been a frequent subject of remark and a matter of surprise to many inquiring minds that agriculture, considering its antiquity as an occupation for man, and its paramount importance to the well-being of the whole human family, should not have partaken of the same rapid development as has attended the progress of physical sciences. It will be the object of this paper to point out some of the drawbacks that have crippled its progress, until at last we find it taking a foremost place among the scientific pursuits of our times, and thence, starting from the time when practical philosophy and erudition came to the aid and service of agricul-

ture, to follow up our observations of the striking episodes in its history that modern times have witnessed. Let us take a retrospective glance through the dim vista of unrecorded centuries in this island—when our wild predecessors roamed in savage freedom through the forests and fens, and over the wild moorlands of ancient Britain—far back for full forty centuries from our time, and we can, in the records of old mystical Egyptian civilization, find evidence of an agriculture flourishing under the Pharaohs, with which that of this country, down to the middle of last century, would have borne but poor comparison. Taking as our warranty for this assertion the scriptural proof we have of Egypt being the granary of all the surrounding countries, and the silent but striking evidence of the

implements of husbandry depicted on the walls of her temples and tombs, we may there recognise the birth place of agriculture as an art, eoeval with that of the sciences of astronomy and geometry, and long antecedent to the rise of fine art in what we now call ancient Greece, or to the Arabic invention and Saracenic development of algebra and mathematics, the very foundation and keystone of the exact sciences. It is then comparatively as yesterday that our Galileos, Keplers, and Herschels, our Priestleys, Faradays, and Davys, our Watts and Stephenson began their labours, and yet see, on every hand, the astounding progress that has occurred in the sciences of astronomy, chemistry, and mechanics. Take, for instance, the fact that this very week we had supplied to our breakfast-tables news, that only a few hours previously had been committed to the electric wires in India and flashed through seas and over mountains for many thousands of miles, to tell us that our *seavants* had succeeded—by means of the spectroscope—in solving some knotty points in natural philosophy, by measuring and analysing phenomena in connection with the recent eclipse of the sun, although occurring at the inconceivable distance from their point of observation of 93 million of miles! Why, then, or to what causes, are we to attribute the stagnation attendant on, and tardy development of, agriculture—the first-born of the arts—through ages in which the discoveries and scientific progress we have alluded to were never even dreamt of? Let us, in explanation and answer to this query, and limiting our view to England, look back for 1,300 years, to the time of the Saxon invasion, and we find such solutions as these: Gildas, a learned monk of Bath, writing about the year of our Lord 530, says: "From east to west nothing was to be seen but churches and houses burnt and destroyed to their very foundations, and the inhabitants, extirpated by the sword, buried beneath the ruins." Again, the Venerable Bede, writing from his cell, and, mayhap, the chair at Jarrow so familiar to us north-countrymen, says: "Britain was so ravaged by the conquering Saxons that there seemed to be a continual flame from sea to sea, which burnt up the cities and covered the surface of the whole isle. Public and private buildings fell in one common ruin, and nothing but destruction and dismay prevailed." After these times had passed, and when the people in the course of 600 years had become thoroughly Saxon, and agriculture had somewhat progressed, came the Norman Conquest; and when, after a terrible struggle, these new invaders had subjugated the country, its state in 1147 is thus described by William of Malinesbury: "From York to Durham there remaineth not a single inhabited village (and most of these had all been agricultural centres) and the whole face of England presented a scene of wretched devastation." Multitudes, afraid to remain in their own homes, built themselves huts in the churchyards, trusting to them as a sanctuary of refuge, and here, after subsisting for a while on roots, herbs, &c., died by holocausts in the pangs of hunger. It is easy, then, to imagine there could be no progress made in such times, and it is not till about 300 years after them that we find even a book of any importance bearing on the subject of husbandry. There was one published by Sir H. Fitzherbert in 1534, which, after epitomising all that was known on the subject, went no further. We then pass through an age where guesses and dogmas such as the following were prevalent as positions of the principles of vegetation. About 1600 A.D., Sir Hugh Platt says: "I find a double fatness in every compounded body—the one combustible and the other incombustible. The combustible fatness causeth vegetation by its vivifying and vapouring qualities, and of these two fatnesses all riches and treasures are engendered. For there is no difference of dung, but as the astringent, incombustible fatness doth overmatch, or is overmatched by, the combustible, so it is more or less adapted for hot or cold ground." This is sufficiently abstruse, but certainly somewhat obscure. We then have a gradual improvement upward till the time of Davy, when for the crude ideas in the application of chemical science to agriculture hitherto held, was substituted true and demonstrable philosophy, opening out a field of research and inquiry that has engaged the best efforts of some of the master minds of the last and present generation. Then followed improved agricultural mechanism, crowned by the application of steam as the motive power, and we have now a combination of practical and theoretical skill at work in the interests of the masses, which has so rapidly expanded and altered the art of cultivation as to give rise to the hopeful expression, "Notwithstanding all that has yet

been done, agriculture is still in its infancy." If this be true, it affords a cheering prospect to those who—looking on agriculture as a profession—see full scope for all their energies and powers of observation, coupled with a fair chance of substantial reward for every judicious and well-matured step in advance. And not less so to others engaged in more strictly scientific pursuits, but who, perceiving an almost fallow field for the conjoint labours of the husbandman, chemist, and mechanic, have turned their most earnest attention to the task, and continue to apply all their energies to this vast arena of competitive improvement; and with what success let the gigantic establishments of our world-famed implement makers, and the acres covered by their production at our periodic shows, bear witness. In his now celebrated lectures before the members of the first Board of Agriculture in 1802, Davy enunciated his new theory containing the fundamental principles upon which the chemistry of agriculture is founded—*i.e.*, "The conversion of inorganic bodies into gases, and the assimilation of gases by organic bodies." Vegetables derive their component principles, which for the most part are hydrogen, carbon, oxygen, and nitrogen, either from the atmosphere by which they are surrounded, or from the soil in which they grow. The process of vegetation appears to depend upon the perpetual assimilation of various substances to the organs of the plants in consequence of the exertion of their living powers, and of their chemical affinities. We have now arrived at a point where the words chemical affinities warn us that an exact science has to be dealt with, in so far as it relates to our theme, and we cannot, with any degree of lucidity, perspicuity, or profit, go further without a familiarity with the first principles of chemistry upon which our future clear comprehension of its operations in vegetative processes will depend. As these papers are specially addressed to those who have not studied the subject to any extent, we shall avoid any attempt at recondite dissertations on chemical action, or the use of puzzling nomenclature, while endeavouring to draw our illustrations, as far as possible, from the familiar objects by which the tiller of the soil is surrounded. In all the multitudinous objects by which we are encompassed, our rivers, rocks, and seas; our atmosphere, animals, plants, forests and fields; in short, in the whole economy of nature, we see but few primitive elements, or bodies having a composition of their own, the endlessly diversified appearances and attributes of matter being traceable to their source from the now ascertained comparatively few elementary bodies. These, under the subtle and wondrous power of chemical affinity, act and react upon each other and their mutual production in endless diversity of election and combination, and so evolve the material from which our globe, with its infinitude of wonders, organic and inorganic, solid, liquid, and gaseous, is composed. In the early history of chemistry, while it was fettered by the dreams of the alchemists (but to whom much is due as pioneers in the science), or when, unfortunately, it was perverted to the abuses of empiricism and designing charlatans, and even down to our own time, hundreds of bodies were accepted as elementary substances that have, since the time when chemistry took her place among the exact sciences, been relegated to the list of compounds, and still her votaries continue constantly by their researches to reduce the number. Looking at our subject from an agricultural point of view, we shall not need to deal with more than about 17 or 18, as necessary for admission to the laboratory of the scientific farmer; and these are, oxygen, carbon, nitrogen, hydrogen, chlorine, silicon, phosphorus, magnesium, sulphur, calcium, potassium, aluminium, sodium, iron, manganese, bromine, fluorine, and ammonium, this last being a compound body, but doing duty as an elementary one. These bodies, then, when brought into contact with each other in certain definitely fixed proportions of weight or volume, and under certain circumstances of temperature, fluidity, or other necessary conditions, exhibit the action of affinity by combining, or, as it were, actually entering into each other, the resultant compound or compounds generally being totally different from the parents elements and from each other, in every characteristic of weight, volume, colour, form, smell, and taste, in fusibility, volatility, solubility, and, in fact, every property of matter. The act of combination is generally attended with the production of heat, detonation, ebullition, or crystallisation. A very familiar and common chemical experiment serves well to illustrate the foregoing remarks. Suppose that of the two invisible or

elastic gases, oxygen and hydrogen, the first a most wonderful supporter of combustion (observe this quality), and the second the lightest substance known to exist (an equally distinctive feature of remark). Supposing we take eight parts of oxygen and one part of hydrogen, and mix them together in these proportions, no matter whether in ounces or tons, they will theoretically remain tranquil, invisible, and innocuous for ever, if kept below the temperature at which they combine and form another substance. But apply a red-hot wire or lighted match to the mixture, and with lightning rapidity every one part of hydrogen selects its eight parts of oxygen—neither more nor less—and *vice versa*—flash into each other with such inconceivable intensity as to cause an explosion and loud report, and instantly form a compound of exactly the previous proportions, but diametrically opposed to every quality possessed by them—namely, water, an incompressible, visible, fire-destroying element, born of and preserved in that form by the laws of affinity. We may again with this very water reduce it to its original constituents as follows, and permanently separate them: Put the water into a boiler having an iron outlet pipe filled partly with iron filings and passed through a fire so that this part become red hot. Then boil the water which passing off in the form of steam and vapour, is, on its way through the pipe and filings decomposed or reduced to its primary gases; but the oxygen having a stronger affinity for the iron than it had for the hydrogen, parts company with the latter, and enters into the iron, forming oxide of iron, or common rust, just as it is doing every day on the unprotected ironwork of your homesteads (only in this case it is deserting the nitrogen of the air), and the pure hydrogen passes off at the end of the pipe where its presence may be demonstrated by applying a light, when it will ignite and burn with a pale yellow flame, taking back oxygen from the air and again producing water. If the iron pipe and filings were weighed previous to and after the experiment they would be found to be heavier by exactly the previous ascertained weight of the oxygen they have absorbed, so beautifully true and unerring are the laws governing chemical transmutations. Again, we may have evidence of mere contact bringing about instantaneous combination, by taking a piece of the metal potassium, the base of potass, and merely dropping it into a saucer containing cold water, when the potassium will seize and combine with the oxygen of the water so fiercely as to burst into intense combustion, until the potassium has gorged itself with oxygen and is presented in the new but familiar form of oxide of potassium—the potash of commerce. The very same action, but with a lesser evidence of intensity, is what you see going on where the simple clod of lime, falling from the cart into a pool on the road, exhibits a vigorous chemical combination going on by mere contact of two cold bodies, one liquid and the other solid, and producing heat and a new resultant compound. These are illustrations of affinity in its simplest form, but it presents more intricate attributes in what is called elective affinity—single and double—and I may here adduce an instance where the exercise of the first-named would be productive of a dead loss to the farmer. Sulphuric acid and ammonia unite easily, and form sulphate of ammonia, largely manufactured from gas water, and forming a well-known chemical manure. Now these two elements are in this form quite satisfied with each other, and ready to serve the farmer a good turn while fairly treated; but let them be brought (as may easily happen) into contact with lime, when straightway the fickle sulphuric acid transfers its affections to the lime, and the ammonia flies off in disgust. This has been brought about by the exercise of elective affinity, where the acid, although previously in combination with ammonia, has another body, for which it has a stronger affinity, thrown in its way of choice. Another example will illustrate the operation of double elective affinity. Suppose we go to a steaming manure heap on the farm, where carbonate of ammonia is being wastefully given off from the decay or slow combustion of the matter composing it. The carbonate of ammonia being of a volatile character, will, if uninterfered with, wander off into the atmosphere in search of “fresh fields and pastures new,” where it will be deposited by some shower of rain washing it down; but the probabilities are, that will happen beyond the boundary of its birth-place, and for some one else's benefit. So, to prevent this consummation, let us give the manure heap a good dusting of gypsum or sulphate of lime. Now this is composed of sulphuric acid and lime, while the carbonate of ammonia is composed of car-

bonic acid and ammonia. Directly they have the opportunity presented them to exercise their elective affinities, the carbonic acid leaves the ammonia, and, as it were, crosses over to the lime, while the sulphuric acid of the gypsum does the same to the rejected ammonia of the carbonic, and thus brings about a complete change; the acids and bases changing places with each other; and, what is more to the purpose, presenting the farmer with his once volatile ammonia now fixed in the form of sulphate of ammonia—the very compound already spoken of in the foregoing instance. Thus we see how a knowledge of even elementary chemistry may be not only a subject of interest and inquiry to the observant agriculturist, but that he may turn to profitable account that knowledge which, wielded by the analytical chemist, enables him to detect to infinitesimal degrees the presence or absence of any individual ingredient in any given compound. Seeing, then, that all the operations of the agriculturist—the growth, structure, and food of the plants—whose perfection his labour, anxiety, and capital is expended upon—are regulated and subjected to the laws of which chemical affinity is one, if not the most important, it will perhaps be admitted that a little time devoted to their study will not be lost. If in this case my audience endorse the hope thus expressed, my endeavours on this occasion will not have been unsuccessful.

The SECRETARY, Mr. Hugh Stephenson, said he endorsed Mr. Stockley's remarks, and quite agreed with him as to science being of great importance to agriculturists. He was, to a certain extent, acquainted with the science of chemistry; he was educated as an agricultural chemist—at least he had done a great deal in agricultural chemistry, and had found great benefit from it. He was sorry that farmers at large did not take the interest in chemistry that they really should; a great many of them ignored it, and thought it really of no avail; but if a farmer—he did not care whether the man was 30 or 40 years of age—would only look up the elements of chemistry he would find that it put pounds into his pocket every year. Science could not do entirely by itself, especially chemical science; it must be combined with good practical knowledge. A man must be a practical farmer before he takes up chemistry. He wished to throw his small weight into the remarks of Mr. Stockley, for he could bear out what he had said, as he (the speaker) had proved it by experience.

Mr. HENDERSON believed that the science of agriculture would be better understood and carried out in future years than it was now. He congratulated Mr. Stockley on the very able paper he had read, and he trusted it would be profitable to them.

The CHAIRMAN said the paper had evidently been written by a gentleman who understood a great deal more than some of them in that room. It could not be expected that the great bulk of agriculturists in this kingdom could be all chemists; but the agriculturists were now assisted by all the first chemists in the country, in one shape or the other; but that would not prevent young men from cultivating their understanding, and such papers as the one read by Mr. Stockley were one of the great means of giving knowledge and information on the matter. He did not think exactly with Mr. Stockley, that agriculturists were so far behind; but still he thought they might be far more in advance. They did all they could in such places as that club to spread useful information; and they were delighted to find gentlemen like Mr. Stockley come amongst them from time to time, and to show them, in the nice condensed way he had, the great value of chemistry to agriculture. If they could go on better he should be very glad indeed; but he feared they would never be able to approach the subject in the way their friend, or analytical chemists, could; but they were doing what they could. They were extremely indebted to Mr. Stockley and other gentlemen who came forward. He thought such clubs as that deserved some credit for what they did towards improving the information of their members; and, taking all things into consideration, he thought agriculture had made very rapid progress indeed. If Mr. Stockley's paper was printed, they would have an opportunity of reading it over, and he could say that he had not heard many better papers than that of Mr. Stockley's.

Mr. WALLACE said they had had a very able paper read, and the discussion had hitherto been as to relation of chemical appliances to agriculture. The heading of the paper, however, was “The Relation of Science to Agriculture.” If anyone

looked back to some of the dates Mr. Stockley had referred to, they would see and admit that agriculture had made the most rapid strides of any profession or calling that existed. If they looked back three hundred years to the mechanical appliances then connected with agriculture, they would find that improvements had since then made monstrous strides; and if they looked back only to the days of their great grandfathers, they would be astonished at the improvements which had been made in the mechanical department of agriculture; and he believed they would see still greater improvements before some of the young men present reached the age of three-score years and ten. He believed they would live to see steam-power used on almost every farm in the country. As to chemistry, it was very much to be regretted that every young farmer did not give more attention to that branch. He himself had felt a great want indeed in not being able to bring the science of chemistry to bear on agriculture. He would only be too glad if this paper, and the exertions of this club, brought before the young farmers of the north the fact as to this deficiency in chemical education. The more chemistry was brought to bear on agriculture, the more would agriculture be benefited by its application. He hoped Mr. Stockley's paper might be printed, and he trusted farmers would endeavour to be benefited by it.

Mr. ANDERSON agreed with a great deal of what Mr. Wallace had said. He thought that agriculture in England stood higher than in other countries, and especially as to agricultural implements. He remembered the day when a thrashing machine was rather a novelty, and now it was found a perfect necessity in every establishment. It was only recently that efforts were made to make reaping machines, and they had now become a perfect success, and were most important in regard to getting in the crops in England. Instead of having as formerly, a batch of Irish labourers, who had to cut the

corn whether wet or dry, the farmer had a machine which would cut any quantity of corn, and cut it in dry weather. Their drills and haymaking machines were now as nearly perfect as possible; but it was different in some European countries. He had seen a horse treading out the hay by merely walking over it; he had seen that in Italy, where they were doing it exactly as it was done in the days of Abraham. He thought there was some chemical knowledge required in connection with agriculture. They had now the opportunity of having an Agricultural College in their neighbourhood. At Haydon Bridge there was a school, which, it was contemplated, might be made of great advantage to farmers' sons. The highest class of education was well attended to, and the lowest was now likely to be attended to; but the middle-class seemed to fall through, and the sons of farmers seemed likely to be less educated than other classes. He would be glad to see the contemplated college at Haydon Bridge succeed; and if it was supported by the farmers of the county there would be no doubt of its succeeding. He concluded by moving a vote of thanks to Mr. Stockley for his able paper.

Mr. BELL (Newcastle) seconded the resolution. He was very glad that they had heard a lecture of this sort, because he believed it was the best way of communicating information. Farmers' sons, he believed, were improving in their education; at all events, they could read and write well, generally speaking; and if they could do that, then they had information very near at hand in the weekly and daily newspapers which were circulated and read in the county.

The resolution was unanimously agreed to.

On the motion of Mr. J. POTTS, seconded by Mr. HEWISON, it was agreed that Mr. Stockley's paper be printed and distributed among the members of the club.

THE COGGESHALL AGRICULTURAL SOCIETY.

At the annual dinner, after the ploughing match, Mr. F. U. Pattison in the chair,

Mr. MFCIN said: I have always had a great affection for Coggeshall, and for this institution in particular, because I have always received from the members of it, under every circumstance, the most marked indulgence, and when opposition, perhaps, might be expected, it has always been qualified by an excellent personal and kindly feeling. And I look upon that as a very wise course of conduct, because if you exclude personalities from such institutions as this you are sure to prolong their existence. You cannot destroy an institution of this kind more quickly than by permitting personalities to be indulged in. We are met, gentlemen, for a great and a good object. It is to encourage the labourer in good habits and in proficiency in his occupation, and altogether we must look upon these assemblages as tending very much to improve British agriculture. You know I am getting an old man ("No, no.") Well, I am 70 next May. In my early days there were no Farmers' Clubs, and no institutions of this character. But I believe I have had the pleasure of attending this meeting now for more than a quarter of a century, and I recollect perfectly well, when employment for the labourer was very difficult to obtain, I saw your prize given for digging. I estimated the time by my watch that it took to dig a rod of ground, and I went back to my farm and had 50 acres of land dug, as a means of employing the people and making profit for myself, at the small charge of £1 6s. 8d. per acre, or 2d. per rod. I found that the men, instead of going to the union-house in the months of November and December, were willing to earn those wages. Times have improved since then or money has got cheaper. At all events I could not have that work done now for less than 50 per cent. increase. That was one good that was derived partially and principally from my visiting this institution. Now we come to a very important question: How can we make farming more profitable—more profitable for the tenant farmer, for the labourer, for the landowner—because they must all go together—and more beneficial and profitable for the country at large? That question is receiving a solution, for the great and interesting feature of this year, agriculturally, has been the trial at Wolverhampton

of the steam ploughing engines, and if you would all read attentively the voluminous report of the judges at those trials, it would convince you, as it has convinced me—if I had any doubt about it—that we must look to the employment of steam power for the future increase and profit of agriculture. There are great impediments to that in the county of Essex. One of the first is that farmers don't understand steam and don't like to face the trouble of having it on their farms. I do not refer to thrashing machines, brought to them to be hired, but to the very advantageous condition of having a fixed engine on the farm for the ordinary purposes of the farm, irrespective of cultivation. I have had one for 24 years, and our people on my little farm of 170 acres would say they would not know how to get on without it. What strikes me as very extraordinary is that plenty of rich farmers—for there is plenty of money in Essex—Mr. Beaumont and Mr. Barnes and other gentlemen of the law know that what strikes me as extraordinary is that these rich farmers don't try the experiment. But the explanation, I suppose, is that the having a fixed steam engine on the farm is a new event, because it entails a new arrangement of ideas, it is different from the shoeing your horses and having your harness mended, and different from the ordinary work of a farm as it has been hitherto carried out. I believe that is the reason that it is not more generally adopted. It ought to be adopted. I see farms of four, five, and six hundred acres which never ought to be for an hour without their fixed steam engine—that is, quite irrespective of steam cultivation. Well, now we come to steam cultivation. Among the impediments are the size of the fields, the incumbrance of trees, and the incumbrance of fences. It is impossible to come from London on this line of railway without being struck by this fact, that small as the fields were originally a vast number of them have been intersected by the railway and cut into halves or into thirds, what was a great evil before being thus rendered still greater. That is a question for the landowner principally, and next for the landowner and tenant combined. I hope and believe that the landlord will find it will be for his interest to give permission to abolish those fences, to do away with those trees, and put the land into such a condition that steam cultivation

can be brought to bear upon it. Another thing too must be done—if the land be heavy and wet it must be drained before you attempt to steam cultivate it. There are some very interesting facts in connection with steam cultivation. Some companies have been formed in Yorkshire, in Northumberland, and in other parts, with capitals of from £20,000 to £40,000 invested in steam cultivation to do the work by contract for the harvest. But you must bear in mind, gentlemen, that in the district in which they are working the fields are 20, 30, or 40 acres each. They could not profitably do it in certain parts of Essex on the same terms. But there is another very great obstruction in Essex—the engines could not cross your rivers, for on every bridge a notice is stuck up that no heavy machine is to go over it. No doubt that is proper, because, as was the case at Battles Bridge, the structure would fall in, and so would the engine; and when I wrote to Mr. Edgington to say that I wanted some steam cultivation, he replied, "My machines are in Cambridge-shire. I should be willing to come to you but I cannot. The bridges will not carry our engines." I must here appeal to our magistrates to feel the pulse of the county and see whether it will be much longer permitted that one of the most interesting and profitable operations of a farm is to be rendered unavailable, simply because the bridges are not put in suitable order. I have that opinion of Essex that a rate would not be objected to and that the magistrates will find they can freely make the necessary alteration. But, gentlemen, do you know what is doing in regard to steam cultivation? I have taken great interest in this question. It is now 15 years ago—for it was in the year 1856—that Fowler's steam plough was first brought on to my farm to plough the subsoil, and some of you, gentlemen, I suppose, must have seen it. But look at what is taking place now. An acquaintance of mine in Berkshire has four steam engines of 30-horse power each. Last year he succeeded in cultivating to a depth of 30 inches, but this year his cultivation is a yard deep. That is a very serious question. He is not a small farmer, for he has 4,600 acres of land of his own which he farms. I believe he has been wise not suddenly to bring the bad soil to the top, but when I tell you that last year he grew many acres of sugar beetroot for the purpose of making brandy it shows you, I think, that there is something going on in British agriculture. It is clear from the facts that come before me that the cheaper class of engines are the most costly and the least powerful. I mean the work can be done cheaper by a 20-horse engine than by a 10-horse engine, although the price may be so much larger at first. I was told the other day that one of Mr. Fowler's first customers who bought an engine of him for £1,500 some 14 months ago, as a practical farmer has now bought another for £1,500, and it is not an uncommon thing for a man to buy two engines at a thousand pounds each as the cheapest way of cultivating his land. I will give you an instance. The evidence we had in the course of the Wolverhampton trials showed that one pound of coal in an engine moved nine tons of earth. That alone ought to teach us that steam as a power is infinitely cheaper than horse flesh. A horse can lift another horse, or perhaps two, but a pound of coal will lift nine tons of earth, or put in a pumping engine it will lift a million pounds weight of water and lift it a foot high. I say that if we as farmers do not take the cheapest power, if we do not give up our prejudices in favour of our old customs, we are not quite sensible men of business. I am not quite so sanguine as to suppose the changes are to be very sudden. We know that in the Rochford country, where fields are large, Mr. Carey has several sets of machines, involving an expenditure of several thousand pounds, and lets them out to the farmers. But there is one point I would call the attention of our landowners to. Three years ago the Duke of Northumberland had a conference with his tenantry, through his steward, with the view of getting to know whether they would like to join in a steam ploughing machine on certain conditions. These conditions were that his lordship was to buy a 12-horse power engine of Fowler's, at £1,500, they then calculated how much would be the wear and tear and how much could be charged to each for the use of the machine. The agreement was made and this was the result, that the tenants had their land ploughed at 10s. an acre; it was then cultivated very deeply the next time at 5s. an acre. If it was cultivated a second time after the first cultivation and the ploughing the charge was 2s. 6d. an acre, and the harrowings were 1s. 6d. per acre—not such harrowings as we have

with three-inch teeth—but with machines of 12 and 15 inch teeth. That has been satisfactorily at work for three years. The Duke of Northumberland receives five per cent. interest on the money invested; the machine is kept in perfect order, with a reserve to buy a new one. There was a little difficulty as to who should have it first, and a very wise arrangement was come to: that was that the man who first cleared his 30 acre field and gave notice was to have it, and the next in rotation and when it became an even question they should draw lots. In that way it has worked extremely satisfactorily; it has been the means of largely increasing the farmers' profits, and I need not tell you has been a great benefit to the country at large. I don't know whether you are aware how many engines there are in this country. I am told there are 10,000 locomotive engines running and 200,000 steam engines employed in making our clothes and other necessaries of life. I say that agriculture must take the lead a little more than it has done. We are all inclined to get a little more profit. I don't know a better farmer than our excellent friend Mr. Catchpool. He has laid his fields open, and what I want to see is that his landlord should make him a covered yard in which to feed his cattle and charge him five per cent., and that he should have also a fixed engine for doing his work. I look upon Mr. Catchpool as one of our best farmers, for the reason that he maintains the fertility of the soil. Cow farming generally is a robber of the soil, but the way in which Mr. Catchpool treats his cows enables him while he is milking them to be also fattening them. He feeds them with cake and grains, and at one and the same time is finding milk and meat for the people, besides making the land grow plenty of corn. I have to apologise for taking up so much of your time. I can only say if everyone of you gentlemen should procure a fixed engine, the comfort and the profit would be such that having once got it there would not be a man upon your farms who would say you ought to do without it. I thank you for drinking my health. I shall go on as long as it pleases God to spare me to point out our weaknesses. I believe we effect good by doing so, and it is therefore that I do it.

Mr. BEAUMONT, as an old member, had great pleasure in proposing, at the call of their esteemed chairman, "Success to the Society," and with that toast he would couple the name of a gentleman who had invariably been willing to place his farm at the disposal of the committee for the agricultural competitions. He alluded, as they all knew, to Mr. E. Catchpool. He was exceedingly pleased to hear one more competent than himself (Mr. Meech) say kindly and good things of him. He was especially glad to hear them from Mr. Meech, because he knew that if Mr. Meech could take the farmer to pieces, or stick his arrow into him deeply, he would most certainly do so.

Mr. CATCHPOOL said Mr. Meech had spoken on the topic of steam cultivation. He, as a farmer, wished that gentleman could have said something about Tenant-Right, for he held that it was of no use a man improving the land he occupied to a great extent if, at the expiration, perhaps, of a 14 years' lease, the landowner was to come down upon him and say, "Your land is of very much more value and you must pay an advanced rent." The tenant, in that case, not only had to find the money for the improvements, but had also to pay a large interest upon it in the shape of increased rent. He quite agreed with Mr. Meech, generally, that keeping a large number of cows impoverished land, but at the same time they must remember that from March to November people's yards were empty. Many of his friends were in the habit of feeding their 50 qrs. of grains per fortnight, which were imported on the farm, and he could not but think it must increase the value of the farm to some extent.

Mr. DENNIS, the vice-chairman, wished to make one observation in regard to what Mr. Meech had stated about steam cultivation. He quite agreed with Mr. Catchpool that the terms on which farmers held their leases did prevent them in a great measure from laying out so large a capital on the land as they otherwise would do. There was great insecurity of tenure even upon good estates, because life was very uncertain, and there were not always children to inherit the farms of their fathers. Farmers were never paid for what they laid out, and their children did not reap the benefit, and it was not altogether a matter of surprise, therefore, that there was not the money laid out in agriculture there ought to be. He felt convinced that if they farmed lands which they could occupy for a long series of years they could make them produce nearly

double what they did at the present time. He was not going to bring any charge against landowners, because they had their interests and farmers had theirs. [A VOICE: "They ought to be identical."] He could not help thinking that farmers were very badly represented in the House of Commons. They had very good representatives so far as landlords were concerned, but what had been done for farmers in the House of Commons for many years past? He was only aware of two important measures. One was to make rabbits game, and the other to do away with the last shilling on the corn, throwing a million of money away which might as well have been in their pockets now. The tendency of Parliament seemed to be to impose no duties on foreigners, and put them all on the farms of the country. With regard to the Malt-duty, he was not an advocate of doing away with it, because he believed the Government could not afford to give it up, but whenever the Malt-duty had been brought forward Parliament had always beat about the bush instead of going right to the heart of the question as they ought. Why did not Government reduce the Malt-duty as they reduced the tea-duty, in such a way that they could recoup themselves by increased consumption? In reference to the insecurity of tenure, Mr Gladstone gave Ireland a land bill. Why did he not give the farmers of England a land bill? Had they not been as faithful to the throne, and as anxious for the welfare of this country? Perhaps, indeed, it was on account of their loyalty that so little was done for them. He did not care what Government we had, Mr. Disraeli's or Mr. Gladstone's. He was for doing justice to everybody, and he meant to say that the lands of this country would never be farmed in the way they ought until measures were passed to make the farmers' capital more secure on the land than it now is.

Mr. BARNES said the speech which had been made by so practical a man convinced him what he had always thought, that the land of this country had not been used to produce what ought to produce. In that case the farmers surely had, to a considerable extent, the remedy in their own hands, for if they could convince the landowners that by better cultivation they could make the land grow double what it now did, and were

willing to increase the benefit of the owner to a fair extent, they would have no difficulty in getting long leases.

Mr. HILLS hoped Mr. Barnes would be kind enough to tell the farmers how they were to lay their capital out with a fair prospect of getting a due return. They knew well enough that if more money were expended on the land it would yield more, but it seemed, according to Mr. Barnes's theory, that the tenant was to lay out all the money necessary for this and not to have the benefit of it. ["No, no."]

Mr. BARNES said Mr. Hills had mistaken him. He of course supposed that if the tenant could be secured in his tenancy, and could grow double the amount of produce he did at present, he would be prepared to give a rent in proportion to the yield. [A VOICE: "On whose capital?"] In part it might be upon the tenant's capital, but they must all know that the land of this country would never go down in its value. The tenant ought to be guaranteed a fair return, but the landlord had a right to have an increase from the value of his land commensurate with the value of the capital of the country. It was the farmers' own fault if they were not properly represented in Parliament. They had sufficient power, and if they only used it legitimately they might be fairly represented. They were certainly taxed for things they ought not to be, and it was for them to bestir themselves in this matter.

Mr. DENNIS said he had never contended for long leases. What he said was that if a man drained a farm and got it into a good state, after it had been in a bad one, he ought, whenever he left it, to be paid something for the improvement he had effected. He had two sons in New Zealand, and so unsatisfactory were the state of things in this regard that he considered it one of the greatest blessings they ever left the country. Looking to the quantity of foreign corn brought into this country, which of course must bring the price down, and to all the responsibilities which the agriculturist had to bear, it was impossible to farm land with wheat at £10 or £11 per load.

Mr. MERRI believed the feeling was that there should be a valuation of and compensation for unexhausted improvements made by the tenant.

BANBURY DISTRICT CHAMBER OF AGRICULTURE.

At the general meeting, the Rev. C. W. Holbech, the President, in the chair,

The SECRETARY said he had written to seventy-six Chambers to gain information with respect to chap-money, as requested by the last meeting, and he had not received very many replies, some of the Chambers waiting to have the matter laid before them before they sent an answer. The answers from the North of England—where the people were so sharp and shrewd—were that there was no such custom there, and the sooner it was abolished the better. The Newcastle Chamber had passed a resolution since he had written to the effect that it was desirable to abolish chap-money, and a general time should be fixed for doing so throughout England. A farmer at Bedford told him they had abolished chap-money with regard to corn, and on cattle it was only a penny a head. Mr. David Curror, of the Scottish Chamber of Agriculture, said there was no such custom in Scotland with regard to sales of grain, but of horses and cattle, and they did not think the practice so vicious as to call for interference. The West Suffolk and Norfolk Chambers wrote that the custom was not recognized in these counties, and the Leicester Chamber that they would shortly discuss it. He thought they should again adjourn the matter, so that he might get more answers, and lay the results before them in a tabulated form.

The CHAIRMAN: I don't think any of the Chambers wish it to be continued.

Mr. R. EDMUNDS thought the practice very objectionable, and they should endeavour to get it abolished simultaneously throughout the kingdom.

Mr. WESTOVER said that, while they were waiting for the decision of the various Chambers, those attending Banbury market laboured under very great difficulty, for a resolution had been passed and they were not able to carry it out. At the last meeting two resolutions were proposed, but not carried—

one by Mr. Dun, that pending any further action they should adopt the proposition of the millers; and another by Mr. Hadland that they should relieve those of their pledge who signed the paper. It was very important that this should be done, for it was impossible to do business without giving chap-money, consequently it put those who signed the paper in an unpleasant position. People must either not do business, or give chap-money. He would move the adoption of the motion proposed at the last meeting by Mr. Hadland, which was—"That in the opinion of this meeting, the change proposed with regard to chap-money, being only partial, does not work satisfactorily, and therefore think it expedient to release from their pledge all those who desire it; and if the Central Chamber of Agriculture will adopt the proposition, the support of this Chamber will be given to the movement in order that it may become general."

Mr. THURSBY seconded the motion. It seemed to him impossible to do away with chap-money unless it was universally done.

Mr. EDMUNDS: I think the motion a proper one, as gentlemen are placed in a very anomalous position at present.

The SECRETARY: If this motion is carried, we should not give up our point.

Mr. WESTOVER: No.

Mr. HADLAND said he proposed the motion at the last meeting merely to get out of the difficulty, and they found very great difficulty in the matter. Since the last meeting the greater part of the farmers had come in and agreed to give chap-money; but he thought there should be some resolution passed to relieve those gentlemen who felt conscientiously that they could not give chap-money, having signed the agreement. If the Central Chamber took it up, they could support them. He thought it should have emanated from the Central Chamber, because it was impossible to carry it out in one place.

The motion was carried unanimously, but it was understood that the Secretary was to get further information on the subject.

Mr. BRAZIER drew the attention of the Chamber to a matter he considered very important, especially to agriculturists. He viewed with considerable alarm a memorial now got up, and which would be presented to Parliament next session. There had been a permissive power in the hands of the Guardians to give superannuation to some of the officers—such as matrons, masters, and others engaged. There was a memorial to be presented to the House of Commons, from the Poor-law officers generally, for superannuation allowances, whether they were long or short in the service, if their health broke down, and they wanted a certain proportion of their salary allowed to them for life. It was not merely to include the master and matron, but to take in the clerk, in fact, to go through the whole staff—the doctors, masters, matrons, porters, relieving officers, nurses, &c., needlewomen in the workhouse or in any part of the union. During the last year there had been about eighty-two officers, in various parts of England and Wales, superannuated at a cost of nearly £3,000. The memorial that he referred to proposed that every officer should be entitled to two-thirds of his salary as a retiring allowance. When they considered how many thousand officers there were in this country, that they were breaking down every year, they would soon have a second race of paupers to provide for, and made so by Act of Parliament. If a proposition like this became law, he did not know what would become of them. He had taken the trouble to write two letters to the Banbury papers on the subject, but he had hoped that some gentleman better qualified than he was would have taken the matter up. He gave notice that he would bring the matter before the Chamber at its next meeting.

Mr. JAMES GRIMBLY: Have not the Guardians absolute power to veto any superannuation allowance?

Mr. BRAZIER: They have now, but they will not have if the Bill asked for passes.

Mr. WESTOVER said he would call the attention of the Chamber to the labour question. He would rather that the matter had fallen into other hands—into the hands of those who could speak with far longer experience than he could; but the question was one of great importance at the present time, and demanded their attention. It was a tenant's subject, and interfered with them very seriously; it was a proprietor's subject, because, as years rolled on, it must affect the value of their property; and it was a national subject, for if obstructions were thrown in the way of the agriculturists, it would curtail the food supply of the country, and they would have to depend still more upon the foreigner for their food supply than they did now. He hoped that when he brought the subject before them—and he trusted they did not think he did so to gratify any vanity of his—that there would be many practical gentlemen present, not to listen to him, but to give their attention to so important a subject.

The SECRETARY said he did not think they would be able to take both the subjects on the same day. They would take Mr. Westover's in February.

Mr. WESTOVER said he was quite willing it should be so.

It was here agreed that the next meeting should be held on the 30th of January.

Mr. EDMUNDS said there was one thing that he should like to bring before them, namely, whether anything could be done by that and other Chambers to strengthen the hands of the Government upon the beer-house question in villages. The Chambers throughout the country were moving in the matter, and if anything could be done to remedy existing evils they would be rendering the greatest service to the agricultural labourer. He did not think there was anything to legislate upon that would prove so great a benefit to the mass of the people than some better regulation of beer-houses. He had no wish to take up the question, but he would do so at some future meeting.

Mr. LITCHFIELD said he should be delighted to be present when such an important subject was to be discussed. He did not think he should introduce it, he was really so often before the public on the subject. He mentioned he had sent a notice on the subject for the agenda paper of the next Quarter Sessions at Northampton. He also said he was in the House of Commons when Mr. Goulbourn brought in the Bill that had caused all the evils they were now complaining of. He had the honour of Mr. Goulbourn's personal acquaintance, and

that gentleman told him that his bill would destroy liquor shops and public-houses; but he (the speaker) pooh-pooled it, and said it would double them. What he then said had proved correct, and for forty years he had been trying to get rid of the evils that it had brought about.

Mr. DUN said that there was hardly a question of greater interest to agriculturists. It was the greatest evil they had to deal with. In their villages badly-managed beer-houses were the greatest curse they had to contend with. They pauperised the men, made them blackguards, degraded and demoralised the children, and encouraged dirt and everything that was bad.

Mr. LITCHFIELD: And prostitute the women.

Mr. SAMUELSON, M.P., thought they could only deal with the economic view of the question.

The Rev. GEORGE MILLER read the following paper: As some of the turnpike trusts in our immediate neighbourhood have already come to an end, and as by the Turnpike Act of last Session many of the remaining ones will be dissolved during the next year, the following questions are naturally of great importance to the ratepayers: (1.) To whom shall the future management of turnpike roads be entrusted? (2.) Where shall the funds come from which shall be required for keeping them in proper repair? With regard to the first of these queries, it appears to me that where Highway Boards exist, the most efficient and least expensive plan would be to entrust to such boards the future management of the turnpike roads which pass through their respective districts. The Highway Boards possess the requisite machinery for the management of the roads in their districts, and the addition of some 10 or 20 additional miles of roads would require no increase of the staff of officials and only a small increase of the surveyor's salary. The chief difficulty in connection with this plan is, that the Highway Boards are not universally adopted through the country. The circumstances of such cases might be met by enacting that in those districts where there are no highway boards, local boards, somewhat similar to the proposed educational boards, should be formed, permission being given to those boards to comprise one, two, or three divisions of the hundreds of the counties, as might be determined by the magistrates residing within such districts, and the local surveyors of the different parishes; that to such boards the management of the turnpike roads passing through those districts should be entrusted. The expense of maintaining such boards need not be large; for the total expense of managing the Kineton turnpike road, though the length of road belonging to the trustees is under 12 miles, does not exceed much above £2 1/2 per mile, and this total expense of management and repair per mile is under that expended on maintaining and repairing the highways of many of the neighbouring parishes. I will now proceed to offer a few suggestions on the second point, the means for providing for the expenses of maintaining in the future the turnpike roads. It has been the custom hitherto when the tolls taken at the turnpike gates have been insufficient for defraying the expenses connected with the management and maintenance of turnpike roads, to levy on each parish through which the turnpike road passes the extra sum needful for the repair of as much of the turnpike road as lay within the limits of such parishes respectively. Now, while the general public paid tolls at the turnpike gates, this plan was fair enough. But now that the general public are to use such roads free of all tolls, it would lay an unfair burden on the parishes through which the turnpike road passed, to make them, and them only, responsible for repairing those roads which are the great arteries of horse and carriage communication through the country. The burden would fall extremely heavily on some parishes, while others would be called upon to pay nothing. As an illustration of this, I will refer to the case of Butler's Marston, which lying between two turnpike roads, actually touches on neither of them, and so would, if the maintenance of turnpike roads were thrown on those parishes only through which such roads pass, pay nothing towards the maintenance of turnpike roads, while at the same time, whenever the parishioners of Butler's Marston go to any of the neighbouring towns, they travel a considerable distance along the turnpike roads. By defraying the expenses connected with the turnpike roads out of the common charges of the Highway Board, or when there is no Highway Board, by means of rates levied on all the parishes comprised in the divisional district through which such roads passed, such inequalities in bearing the burdens of maintaining the turnpike

roads would be prevented. But the question arises, whether it is fair that inasmuch as turnpike roads have hitherto been maintained by tolls levied on the public generally, now that the turnpike trusts are to be dissolved, the whole burdens of keeping those in repair, should be thrown upon the ratepayers. I think not. And in connection with this part of the subject, I would draw your attention to the principle with regard to assisting, under certain circumstances, local taxation by grants from imperial taxation, which has been recognised by the Legislature. It is enacted by the Public Elementary Schools Act, that when School Boards are formed, and rate-supported schools are established, while the rates of the parish or district are to be the primary fund, out of which the expenses of maintaining such schools are to be taken—that when such parish or district shall have been rated for the support of schools, to a certain amount, 3d. in the pound, imperial taxation will be called upon to help the finding further funds when they are required. But to prevent waste and extravagance on the part of such boards, the assistance granted out of the National Exchequer is limited to a certain definite amount, and if further supplies are requisite beyond the 3d. rate and the Government aid for defraying the school expenses, it must be found by the ratepayers. Now, if the Legislature in the case of schools which are a new charge upon the rates have adopted the principle of giving aid in support of them after a certain definite rateable sum has been obtained from the districts in which the schools respectively are situated, may we not with fairness ask that the same principle may be applied with reference to the fresh burden upon the rates, namely, that of maintaining turnpike roads after the expiration of the Turnpike Trust Acts. For if the Legislature is ready to assist in providing a road to learning for the people of the land, shall we not ask the Legislature to help in bearing the additional burden now about to be thrown on the ratepayers of maintaining and keeping in good order those material arteries of communication, turnpike roads? It seems to me that the principle embodied in the Elementary School Act for aiding local rates by grants from the National Exchequer, is the right principle on which such aid should be given, and that in our endeavours to secure a fairer adjustment of the burdens which fall upon the ratepayers this principle should not be lost sight of, as it relieves the rates without weakening local responsibility on the one hand, and without encouraging extravagance on the other. But this is wandering somewhat away from the subject before us. I will therefore conclude by proposing the resolution I have drawn up, and which I believe has been sent by the secretary to the members of our Chamber: "That the management of turnpike roads, after their Trust Acts have expired, be confided to the District Highway Boards, and that the expenses of keeping them in repair be paid out of the common charges of such Highway Boards, assisted, when such expenses are excessive, by grants out of the National Exchequer."

The CHAIRMAN asked on what principle they would consider the expenses excessive?

Mr. MILLER: Act on the same principle as is adopted in the Elementary School Act.

The CHAIRMAN: This question is raised, when would the excess commence?

Mr. MILLER: After you had spent on the road a certain amount.

The CHAIRMAN: The argument you use would not affect the general public. They would not pay one farthing.

Mr. MILLER: Unless it was done on some definite basis like that of the county rates, and be a primary charge, they would not get any assistance from the Government.

Mr. LITCHFIELD: If you go to Government for relief whenever the charge is in excess, it will be in excess directly.

Mr. BRAZIER: Two or three miles of turnpike will fall upon a little parish like Grimsbury, and Banbury won't pay a single fraction.

Mr. TAWNEY: Does it not come upon the Board of Health?

Mr. BRAZIER: No. They only pay for the borough. Neithrop will have over five miles of road thrown upon it, and the matter is a very serious one. The charge would be upon parishes.

Mr. DAVIS: The charges fall upon the highway districts, not on the parishes.

Mr. LITCHFIELD: The law is so I believe. Where there are waywardens the expense is thrown over the whole district.

In districts where there are no waywardens, it will fall upon the parishes through which the road goes. For instance, at Brackley, till you go into the parish of Turweston all the expenses are charged to the district, but the moment you get into Buckinghamshire the expenses fall upon the parish through which the road goes.

Mr. JAMES GRIMBLY said that his present position as chairman of the Board of Health, which probably some of the gentlemen present were not aware included the parishes of Neithrop and Grimsbury, might be an excuse for his saying a few words in reference to this question. As far as Banbury proper was concerned it had hitherto maintained its own roads, and continued to do so. The roads in Grimsbury and Neithrop had been maintained by tolls taken at the turnpike gates, some of which had been abolished, and others at no distant date would in all probability share the same fate, so that it necessarily threw a very heavy burden upon those two parishes. There being no waywardens for those two places, they would be considered parishes on which the total expense of the maintenance of those roads would fall. The turnpike roads in the immediate neighbourhood of a town like Banbury were much more used than roads a few miles further away, but they had heard of such a thing as a road being kept in repair for £2 a mile—(No, no). He thought Mr. Miller said so.

Mr. MILLER: That is the management.

Mr. GRIMBLY: Those roads I refer to cannot be maintained under something like £50 a mile.

Mr. BRAZIER: It will cost nearly £80 a mile.

Mr. LITCHFIELD: No, no.

Mr. GRIMBLY: The parishes of Neithrop and Grimsbury will have nine miles of road to keep in repair, and the charge will be something like £400 or £500 a year.

Mr. LITCHFIELD: No, no.

Mr. GRIMBLY: I believe that statement can be substantiated. It appears to me that the charge should be borne upon a wider area than at present. The area should be extended. It should either be county rating or union rating. Without having deeply studied the question, it occurs to me that union rating would answer this district very well.

Mr. WESTOVER said that in considering the resolution proposed they must ask a definition of excessive expenses. If the average of three years' expenditure, they might find it very wide of the mark of what was necessary for the repair of the road, for the money often had not been economically expended. It was very severe punishment to be compelled to keep the roads in repair for the benefit of the public in general. The roads ought to be treated entirely separate from the present rateable area. They ought to seek the money for their maintenance in some other way. Mr. Knatchbull-Hugessen held out some hope that they might get some relief when they came to do away with the turnpike gates. Agriculturists as a body were anxious that the gates should be done away with, but they thought it was unfair to expect them to contribute so much for roads which were for the general benefit of the public. It was a national affair, and they ought to seek help from another quarter than the rates. It had been mentioned in the room that there should be a horse-tax—(No, no)—that a horse-tax on the graduated scale should be collected for the maintenance of the roads. It seemed right that those who used horses should pay for the roads. But there was no doubt they would never be fairly dealt with until they altered the area of local taxation altogether.

Mr. TAWNEY believed that those who used the roads should pay for them. He was extremely sorry to see the turnpike gates taken away, but he must say that the system had been very bad. The roads had been cut up into small districts, and each had a large staff attached. He believed that it was a mistake to have the lengths so short, but it only arose from the circumstances of the time. He was not sorry that the system was being done away with, but he was that the gates were, because he believed it was the simplest and best way of making men pay ready money for wearing out the roads. He thought it was too late in the day to ask State aid. Forty years ago there were no railways, and they could not say now that the roads were the main arteries of the country. They must be maintained by local taxation, and it should be spread over as large an area as possible. He did not believe they would ever get the Government to think differently. With regard to Neithrop and Grimsbury, they ought to come upon the Local Board. They were isolated—

Mr. GRIMBLEY: The charges on each portion of the Local Board are borne separately.

Mr. TAWNEY: So that the rich part of Banbury does not pay so much as Neithrop.

Mr. GRIMBLEY: Each pays for its own roads.

Mr. TAWNEY: It seems to me that the charge should come upon the Local Board.

Mr. GRIMBLEY: The three places are kept distinct.

Mr. TAWNEY: The traffic is very heavy near the town; it is the town's people who wear out the roads, and now that they have no turnpike to pay they will reconsp themselves in that way. According to the terms of Mr. Miller's motion the expense would come upon the general fund where there were highway boards, and if they could get the country cut up into large districts he believed there would be no great harm done by the arrangement. It was unfortunate for places where there were no highway boards, and the sooner they were adopted generally the better. They had talked about the cost of maintaining those roads, and one gentleman had said it would be £50 a mile. But they must remember they were speaking of a system that was passed, and he believed that in future things would be more economically managed than they had been. If they got a highway board, the first thing to do was to get a good surveyor.

Mr. LITCHFIELD: How will you get him?

Mr. TAWNEY: If you like in a manner of election; but perhaps you might shut your eyes to the fact that £20 in a surveyor's salary might make a difference of £500 a year to the district. It would be well if people could only abstain from voting for a man because he was somebody's aunt's first cousin, and would do it for £5 less than another man. What they wanted was supervision, and by it they would get the work done economically. This had been tested at Henley-in-Arden, where the cost of the roads was not half per mile what theirs came to. The surveyor resided out of the district, but he had four first-rate foremen who worked under him. He then proceeded to say that it was a great advantage if highway boards could meet in the morning. They could not do it here because their clerk was clerk to the Guardians. When they met in the afternoon it was generally spent in talking.

Mr. RISLEY was sure the Chamber felt very much indebted to Mr. Miller for his paper, and that they would all profit by the suggestions he had thrown out for their consideration. He did not regret the abolition of turnpike gates, but only regretted that it was not more general. He looked upon those gates as an intolerable nuisance by night and by day. It was a nuisance to unbutton one's coat on a cold night and search for a coin that possibly one might not have—and they could not help feeling sympathy for the old lady who, regardless of weather, had to come down in the very slightest of attire. He thought the Highway Act should be made compulsory—and then the difficulties under which they at present laboured would be to some extent removed. He could not help thinking that the Government was possibly waiting until all those trusts were done away with, in order to make highway boards compulsory, and give such assistance as should remove the difficulties under which they were labouring. He moved a vote of thanks to Miller for his paper.

Mr. SAMUELSON, M.P., was glad to have been present during the discussion, for there was no question the subject of the maintenance of roads, and the subject of the administration of roads generally, must shortly come before Parliament, now that there were so many trusts expiring. He thought it was very fortunate they should at this moment have Mr. Knatchbull-Hugessen at the Home Office. Although only Under-Secretary, he believed that no man was more intimately acquainted with legislation on this matter. It was a question which he might say had almost been the study of Mr. Knatchbull-Hugessen's life, and the advantage of having his assistance in settling the matter must profit them very considerably. He was very glad indeed to hear an expression in favour of Highway Boards being made universal. He thought they had too much permissive legislation. Probably at the outset it might be necessary to feel their way, and proceed tentatively; but when measures had been tried for a considerable time in a sufficient number of districts, they were enabled to discover their merits and defects, and if found to admit of any necessary modifications they should be introduced and the measures made general. There should not be one law for Northamptonshire and another for Lincolnshire and

Yorkshire. ["Hear, hear," from Mr. Brazier.] He was surprised at Mr. Brazier, because he believed in making the liquor traffic another permissive question. [Mr. BRAZIER: I believe it would benefit you as well as me.] The question then arose whether the area of distribution was sufficiently extensive, and they would probably find the more they enlarged the area the better it would be. In regard to the latter part of Mr. Miller's resolution, it might be worth while for them as agriculturists of the district, to see whether they could squeeze something out of the Government, but he thought it would be found very difficult to manipulate. Although Mr. Miller had drawn a very ingenious comparison between the highway and the school boards—in each case they were new charges—yet there was this difference, the school boards, besides being a new charge, was altogether indefinite, and it was necessary to coax the authorities in districts into the formation of school boards. It was a matter of expediency, and it was quite right they should have a guarantee given in any extensive parish. He did not think they would get any assistance from Government for turnpikes, and it would be for them to consider the best area of rating for their maintenance. Now, another reason why it would almost be impossible to ask the State to contribute was, that already over a large area there were no turnpike roads. If they would only go into the North Riding of Yorkshire—which equalled in area one or two of the Midland counties—they would find that in a large portion of it there were no turnpikes. The Government would thus have a ready answer, and point to the district saying, "You can't ask Parliament to vote funds for the maintenance of your roads. Those who use them—distribute area as widely as you like—are the proper persons to pay." He thought that that was how it would fare with the latter half of the resolution. He agreed with the first half, and said they should have an authority for the management of the roads, and it was most desirable that the Highway Act should be generally adopted. He should be happy to be of any use in Parliament in the matter and would receive any suggestions upon it. He would give his best attention to the subject when it was brought forward, and no doubt it would be very shortly.

Mr. BRAZIER: You should not compare Yorkshire with Northamptonshire and Oxfordshire. The manufacturers of the former turn their money over twelve times while a farmer only does it once.

Mr. SAMUELSON: It was the same before any manufactories existed.

Mr. LITCHFIELD: With regard to going to Government for money, I confess I cannot help feeling strongly that it had better be withdrawn from the resolution. I am not fond of trying to put public money into my pocket, and I feel thoroughly, after what Mr. Samuelson has said, there will be no chance of getting it. There was a certain amount of discredit in asking it. No Government would give them it, and they would be referred to what was done in Yorkshire.

Mr. DUN had great pleasure in seconding Mr. Risley's motion that a vote of thanks be given to Mr. Miller for his paper. He agreed with several of the speakers that the latter part of the resolution was not the strongest part of it, being rather indefinite. It was not likely that any application of theirs for assistance in support of those roads, which were really for the benefit of the locality in which they had been made, would receive any response from any Government. There was one proposition which fell from Mr. Westover which might be made available for the purpose, and it was something like the principle upon which those roads had been maintained during the long period they had been used, and by which those who used the roads might be called upon to pay for their support—namely, that something in the shape of a tax upon horses should be adopted. At present they had this kind of machinery adjusted under the assessed taxes, and something like £400,000 was collected every year in this country from a tax of 10s. 6d. per horse. That gave something like eight hundred thousand horses in this country not in the possession of agriculturists or employed specially in agricultural labour. He thought their owners might properly be asked to pay towards the expenses of those roads which every day they made use of. If a charge of 20s. was made for each horse it would realise something like £800,000, or nearly a million, and in this way they would get at a large number of horses in

the possession of brewers, millers, and others who, by the ordinary system of assessment, would not pay very largely towards the support of the roads. This suggestion might perhaps meet some of those difficulties which seemed at present to be in the way of an equitable adjustment of the question.

Mr. MILLER said that one great reason why he appended the second part to his resolution was that that the Chamber, about a year and a half ago, passed a resolution in which much the same thing was embodied. It was then expressed that not only should local rates be called upon, but imperial taxation as well. He thought the horse tax would be rather a hazardous thing for agriculturists; they should not say too much about taxing horses, for perhaps horses used in agriculture would be taxed as well. He mentioned that he should like to see the old plan returned to—namely, not sending in the resolution until the paper had been read. Under the present arrangement, one had to draw up the resolution and give it to the secretary, and then write the paper; at least it had been so with him, in consequence of want of time. He was quite willing to withdraw the second part of his resolution.

Mr. WESTOVER: The resolution is sent to the secretary, so that he may put it on the notice calling the meeting, and then the members know what is coming on.

Mr. WALTON objected to taxing horses for the maintenance of the turnpike roads.

Mr. COLEMAN said that he was a member of the Brackley Highway Board, and had been for some years, and it was not for the want of talking or changing surveyors, but it did not succeed. The working of the waywarden board was a failure altogether, and here they were about to pass a resolution that the roads should be confided to them. They spent more money on the roads and they were not better, but worse. The great blot was the want of supervision. It was impossible for one

man to superintend 175 miles of road. They were told that the waywardens were not to interfere with the management of the roads, and were only to complain at the meetings; but unless the waywardens did all they could to assist the surveyor, the money was shamefully wasted. They would do wrong if they recommended the Act to be made compulsory, and there was a general feeling among farmers that it should not be so.

Mr. DAVIS said the Act made it compulsory to appoint only one surveyor, but he thought there should be a discretionary power left to a Board to appoint such a number of surveyors as they thought necessary.

Mr. WESTOVER said it was hardly fair to condemn the highway board system because it did not work well in some places. Their district (the North Wootton) was said to be a model district, because they did not quarrel. The Board had always worked amicably. He admitted that there was a want of supervision.

Mr. LITCHFIELD moved, and Mr. TAWNEY seconded, that that part of the resolution asking State aid should be struck out, but on the vote being taken, fourteen voted for the following resolution against ten: "1. That the management of turnpike roads, after their trust Acts have expired, be confided to District Highway Boards, made compulsory, and of a wider area than at present. 2. And that the expense of keeping the roads in repair be paid out of the common charges of such highway boards, assisted by grants out of the National Exchequer."

Mr. LITCHFIELD was rather disappointed to find they had confined their attention entirely to turnpike gates, and should have been glad if they had turned their attention to highway gates.

Mr. SAMUELSON moved a vote of thanks to Mr. Holbech for presiding, and the proceedings terminated.

THE DORCHESTER FARMERS' CLUB. THE AGRICULTURAL LABOURERS' HIRING FAIRS.

At the December monthly meeting, the President, Mr. J. G. Homer, in the chair, the attendance was large considering the time of year, this being the last Saturday of 1871.

The Rev. THEOPHILUS BENNETT read the following paper: Jeremy Bentham says that "The poor would need less charity if they got more justice." And I believe the priest who preached the funeral sermon over that illustrious Irishman O'Connell, chose for his text, "Blessed are they who hunger and thirst after justice" (*δικαιοσύνη*), which is a better translation for the Greek original than that of our version, which has righteousness. I know it is the desire of all here to render justice, and therefore I think myself happy in addressing you. I once travelled with a clergyman and his wife, and the clergyman told me that his wife was constantly preaching two sermons, very short but very pithy. Her morning sermon was, "Lessen your wants," and her afternoon was, "Help the poor to help themselves." This should be our motto, to help the agricultural labourer to help himself—to inculcate upon him the great lesson of self-help. Heathen writers urge, "Help yourselves, and the gods will help you." Teach the agricultural labourer how he may work; how he may supply himself with the necessities of life; how he may preserve his health—in short, help him to help himself, and you do a great work. Gentlemen, our subject to-night is "The condition of the agricultural labourer." Observe the subject is general. It does not refer exclusively to that which has almost passed in other parts of England into a bye-word and a proverb, and a standing reproach—the Dorsetshire labourer. But as this is a species under the genus, and one that touches us closely we may be permitted to draw attention to our own county labourer, and see his condition, and how we may improve it. For "the street will soon be clean if every one sweeps before his own door." If we want to purify the ocean, we must purify each drop. Whilst our charity or Christian love should not end at home, it at all events ought to begin there. In speaking of this topic—bear in mind I am alluding to the agricultural labourer pure and simple; I am

not alluding to the shepherd, who has more pay and perquisites because he is entrusted with the care of property, the meat of which at 10d. per lb., to say nothing of the gold-procuring-fleece, is most valuable. Nor am I alluding to the carter, who is a village Piekford, often entrusted with the conveyance of very precious articles, with no other insurance but his native honesty. The man is always commended who calls a spade and not "an implement of husbandry," but simply "a spade." And when I speak of an agricultural labourer, I do not allude to a foreman, a shepherd, or a carter; but exclusively to the lowest grade—the agricultural labourer. I wish this to be distinctly understood, so as to narrow our deliberations to the worst paid and most necessitous class of the community—viz., the Dorsetshire agricultural labourer pure and simple, a labourer and nothing more. Regarding the condition of the labourer (condition, Latin *conditio*; that from *condo*, to build, to make) I. We take condition as meaning state, a particular mode of being, applied to external circumstances, to the body, to the mind, and to things; in the sense in which Pope uses it—

"Condition, circumstance, is not the thing;
Bliss is the same in subject or in king."

What is the actual state of the agricultural labourer? I take up a little pamphlet, entitled, "Letters on the Large Farm System," by George C. Miall (reprinted, by permission, from an American daily paper, *Newark Daily Advertiser*), and I read extracts from this book, not as endorsing them, but in order that they may be refuted, if untrue or exaggerated, by the experienced friends I see around me. In the first page, Mr. Miall says: "In the county of Dorset, where the farms are very large, and the labourer's pay is very low, women receive 6d. a day in ordinary time, and 1s. 6d. when there is extra work, &c." On pages 14 and 15, I read the following: "The amount of wages paid, and the religious, moral, and social condition of the English agricultural labourer is absolutely disgraceful to a country which boasts of her civilisation. Our 'Saturday Reviewers' and 'kid-gloved' writers generally

ignore this state of things altogether. Here are the facts: The Dorset labourer's weekly pay is 8s. per week. In addition to this he has 'house, firing, and cider,' and in some cases other small perquisites, which of course depend entirely on the disposition of his master or employer. In some cases they get ground for planting potatoes, and 'allowed' to keep a pig; but in most cases the large farmers prohibit their labourers from keeping stock of their own. The 'house' is in many cases a mere mud hovel, not worthy of the name, if they are lucky enough to get one at all. The 'firing' is the furze or gorse which grows in large tracts on the hills, and affords better shelter to the game of the squire than it does warmth to the hearth of the poor labourer. The 'cider' is cold, thin, watery, sour stuff, which does him far more harm than good, and it is often 'doctored' in harvest time in order to excite the poor wretches, so that an extra amount of work may be got out of them. Parliamentary commissions have told us of the immorality caused by the overcrowded state of the labourers' cottages. No one can reside for many weeks in an English village without becoming aware of this state of things. And no wonder, when we consider that the ordinary dwelling of the labourer consists of but two rooms—one for eating, cooking, and for all other purposes, and the other for sleeping. I know myself dozens of cases where the father, mother, and six or eight children, grown up or otherwise, occupy the same sleeping apartment, and even bed during the winter, all huddled together like a litter of pigs for the sake of warmth. The only wonder is that the poor creatures are not worse in morals than they prove to be at the present time. What a satire this state of things is upon the recently passed Elementary Education Bill and the endless wranglings and bickerings over it! The higher classes fighting about who shall control the religious opinions of the children of the peasant, and at the same time they will not allow the parents proper means to live commonly decent. With the present low prices of wages compulsory education in the rural districts is an impossibility. The large farmers won't employ single men, or married couples without children. They like a man with a large and rising family. They insist on the boys going to work at about ten years of age, and the girls at about fourteen. Besides, how could a man maintain his family without the aid of his wife and children? When the labourer returns with his family from their daily toil the evening meal, which generally consists of an immense pot of vegetables, flavoured, perhaps, with a small scrap of pork or bacon, where are his home comforts? He is only too glad to exchange the rude cheerless cottage for the roaring fire of the neighbouring beerhouse, where he can spend the evening over 'a pint of beer and a pipe of baccy,' and a dance, may be, on Saturday nights." 2. Condition means quality, rank, social grade. What sort of quality can a man maintain on eight shillings per week? Put yourself in his place. How could you get on with only the bewildering income of eight shillings? Mechi says: "The economy of the labouring classes must be truly wonderful." One-half the world don't know how the other half live. And this eight shillings a week problem is one that I fondly trust none of us may ever be called on practically to solve. Talk of luxury, talk of even common beer! To paraphrase *Punch* slightly:

Eight shillings a week, with wife and kids to feed,
Don't leave a fellow much for beer indeed.

And yet so far as dignity is concerned, is it not in reality great? "Instituted, like marriage, in the time of man's innocence," it is the most ancient, for it was our original condition.

When Adam delved, and Eve span,
Who was then the gentleman?

And yet there are those who, from their pride of place, look down upon the labourer as if he were a mere serf or hind. Even their employers do not show that interest in their welfare that one might reasonably expect. There is too much of intolerable pride stalking haughtily over the land—too much of the unlovely spirit of caste, too great disservice of class from class. What says the practical experience of Mr. Scott Russell on this subject? After viewing this country in comparison with others, he says, "I have come to the conviction that the social relations between the different classes of society in England are too intolerable to last long; they must either be speedily and timely cured, or they will suddenly cure themselves." 3. Condition means state of the mind, temper, tem-

perament, and complexion. The complexion of many of the labourers is florid, clear, and bright, and rosy as their master's apples. Like David, they are "ruddy, and of a fair countenance." The temperament of our Dorsetshire labourer is truly polite. I have noticed genuine refinement of feeling in several of them; they are "Nature's gentlemen and Nature's gentlewomen." "Temper," said a bishop, "is nine-tenths of Christianity," and, considering their trying lot, their tempers are admirable. Seldom do you hear angry expressions. All this is the more remarkable as they take few pleasures. There are not many things tend more to sweeten the temper than amusement, but these our labourers have not. Even the children do not play with the same vigour as those in other counties. Happily, we do not hear of degrading sports and amusements amongst our people like the bulldog fighting in Staffordshire and the Sunday dog racing of Lancashire. But cheap excursions, cricket, football, and such like, are things almost unknown to our rural population. Something might be done to encourage harmless pastimes and diversions, remembering the trite observation, "All work and no play make Jack a dull boy," ay, and a dull worker too. And then with regard to the women, it has been remarked that shopping is to ladies what shooting is to gentlemen, but our poor Dorset women have very little money for that. Lord Sydney Godolphin Osborne lately spoke against this vice of over-dressing, coining the word "dressard" to fully express his meaning. But with their meagre pay, few of our labourers' wives or daughters, if ever so much inclined, can afford to be dressards. And in this matter it would be well if those above them set a better example, and dressed with more shamefacedness and sobriety, and gave the money thus saved in charity, remembering what the genial Goldsmith says—"The nakedness of the poor might be clad from the trimmings of the vain." And this brings me to the fourth meaning. Condition includes "moral quality, virtue or vice." How are our people as to morals? Professor Buckman answers, "The morals of the people are weak and unstable, like the Dorsetshire fences! Many of the young people marry themselves before the clergyman marries them." Where glove-making is carried on, the females are more generous of their charms than even in other parts of the county. Glove rhymes to love, and illicit intercourse is drawn on. "Love" children are plentiful in the county, and the first child I was ever called upon to christen after I entered on my duties at Wynford Eagle was called by this name. The mother, not being then a married woman, instead of being ashamed of giving birth to an illegitimate child, actually insisted on branding it with this name; and Love it was called at the font, and Love it will remain to its dying day. A love child, it is called Love. I spoke about there not being many dressards amongst our agricultural women, nor are there many of habitual drunkards amongst our men. There are several hamlets and villages in our county where there are no drink-shops or public-houses. Around Maiden Newton I know of seven parishes where there is no house for the sale of intoxicating drinks, and as a result drunkenness is almost unknown. I hold two such parishes unsullied by the liquor traffic, and I am happy to say I do not know a working man in either of them who is a drunkard. We pray, "Deliver us from temptation," and where there is no dram-shop one great temptation is removed. The tired labourer is not then assailed at his weakest moment, when he returns fagged from his work, by the bland president of beer-barrels and spirit-flasks. There is, I am afraid, a good deal of filly talking, and some of the women are very foul-mouthed in their language. I have heard of a nobleman who was kept awake during several hours of the night by the lewd and indecent talking going on under his window as he lay on a bed in the village, about eight miles from this county town. The fountain of the human heart must be very impure, from whence flows the libidinous talk of field labourers of both sexes. There is not much more attention paid to the ninth than to the seventh commandment, and one neighbour thinks very little of robbing another of the treasure of a good name, more precious than silver or gold. As our greatest of poets says,

"Good name in man or woman, dear my lord,
Is the immediate jewel of their souls."

I have myself taken people to task for thus filching away the reputation of their neighbours by bearing false witness against

them; but only to meet the sternest opposition. In one case where I did this on the clearest evidence, the offending guilty party have become so exasperated at not being permitted to persevere in this nefarious course of slander that to avenge themselves they excommunicate themselves so far as their parish church is concerned, for they never enter it. Then, again, the third commandment is frequently violated, and the hot oath proceeds from blasphemous lips. In France, in former days, the lips of the blasphemers were branded with a red hot iron brand. If every one got their deserts in this way, there would be many hot mouths in the county; and, perhaps, some amongst the employers as well as the employed. But I must not dwell longer upon this dark theme of immorality. 5th. I therefore proceed to a fifth meaning of the word under consideration. Condition means terms of a contract, or covenant—stipulation. As Dryden says:

“Make our conditions with your captive king.”

As the sacred writer, St. Luke, says:

“He sendeth and desireth conditions of peace.”

What are the conditions as to the hiring, &c., of the agricultural labourer? On the 14th February (Ash Wednesday in 1872) the Caudlemas fair is held for hiring labourers. Who is there that approves of this system? Do the masters? Do the men? Is it not rightly called mop fair, from its mopish, gloomy nature? Does it not make dismal those that attend it? We have heard of slave markets—is there nothing of the nature here? Slaves are trotted out; put through their paces like horses under the auctioneer's hammer. Listen to the picture given by my neighbour, Mr. E. Whittle, when speaking of the payment of agricultural labourers in Dorset before this respected Club, on December 30th, 1865. He said, “Now he came to the system of hiring at Caudlemas fair. On the 14th February, on coming into Dorchester, they found a lot of men in the streets, waiting to be hired, some of them standing up against Messrs. Williams' Bank. He knew a gentleman who hired a very able carter, as he thought, who was standing there; but when he got home he found the man was a cripple. After that he believed his friend always turned his men out before he had them home.” Now, I ask, is not this turning out another name for putting him through his paces, to see if he is sound in wind and limb, something very like Mrs. Beecher Stowe tells us about the American slave market of former days? I ask again is an open fair a good place in which to make an agreement! Does not this annual hiring generate a most unsettled restless feeling between employers and employed? Is not the bargain very like “a pig in a poke” on both sides? The master can know nothing of the man. Again, to quote Mr. Whittle, of Toller Fratrum, “They could not tell the worth of a man hired at a fair, any more than the man in the moon. He might turn out good or bad. If a farmer had a bad man he wished to get rid of him, and might give him a character which was deceptive. Not that he stated what was untrue; but because it did not contain the whole truth. But that was the fault of the system. The present plan necessitated a change once a year. On the 14th of February a labourer came and asked, ‘How about another year, master?’ which no other servant did.” Mr. Genge said on the 20th of February, 1864, “His experience of fairs was that he once hired a carter, who came and took his horses, and went off with them, and he had never seen him since. That was one specimen of men hired at fairs.” And to show that it is “a pig in a poke” bargain on the side of the agricultural labourer, I quote Mr. G. W. Homer, of Athelhampton, speaking before our Club on March 15th, 1862: “A servant also, who makes an agreement”—at a mope or drone fair, as Mr. Homer calls them from the drones that frequent them—“at such a place, has to reside with his family in a house which he may never have seen, and which may prove to be an uncomfortable and most unsuitable one.” All this teaches us that master and man could spend their time on St. Valentine's Day more profitably than by attending this dismal drone fair, which most agree ought to be abolished; or, if it be retained at all, ought to be transferred from St. Valentine's Day to Michaelmas Day, when the goose is rumpant! As to payment. In ancient history we read of work so highly esteemed that the labourers were paid daily in gold. And agriculture is of such vital importance to the community that its labourers should be adequately and punctually

remunerated. When I had labourers myself in Ireland I always paid them on Friday nights, and some of them for task-work making—making drains—drew as much as 19s. per week during the short days of the winter months. I think, with many others, that all perquisites should be abolished, and that the Dorset labourer should be paid in money every Friday night. “Capital and labour,” said Mr. J. Howard, “are the two piers of the aids on which society rests. Each should do their duty. The capitalists should pay adequately and punctually. And the labourer should ‘buckle to’—be “all there”—and put his heart into his work, giving “a fair day's work for a fair day's wage.” For there are many complaints that the labourer does not do so much work now as in former days. This reproach it should be theirs to remedy. Then with regard to the farmer. The adage says, that “when the fisherman is not engaged in his calling he should be mending his nets;” and therefore the farmer M.P., Mr. Clare Sewell Read, says in his admirable lecture on our subject to-night, “There is one thing I wish to impress on my brother farmers, and that is the necessity of making a better use of wet days. I do think we should all try and get a great deal more in-door work done in wet weather. Preparing manure, crushing corn, grinding cake, and many other things ought to be done on rainy days.” Further on in his lecture, the tenant-farmer M.P. says, what might be inscribed in golden letters over every farmer's mantelpiece—“The farmer has many opportunities of doing good at no great cost to himself. In many cases, I fear all the skim milk is given to the pigs. Why should it not be given to the labourer who requires it? Then again there are the comforts of the farm-kitchen that might be dispensed.” I now come to what I consider ought to be inscribed in letters of gold in a conspicuous place before every farmer's eyes: I think every farmer ought to be able to feel every night that he has done something towards making those around him happier and better, and if he cannot do that, why then I think he has not played his part satisfactorily. Piece or task-work is highly commended, for work is thus done more expeditiously, at less cost, and it affords more encouragement to the skilled labourer. The better the work the better the pay. When farm-servants themselves were called together the other day, and were asked freely to state what they desired, the sum of their demands was liberty for cow and pay at the rate of 15s. per week. And here let me remark that hiring should be by the year, otherwise the labourers may greatly inconvenience the farmer by leaving at the busiest season, during harvest-time for instance. Emigration is strongly recommended, and it was lately authoritatively stated that there was room for 4,000 men like Wiltshire labourers in Canada. So far for the word condition. I have only room to glance at my other two words—“agricultural labourer.” Agricultural, from *ager*, a field; and *cultor*, a cultivator—the most primitive, the most extensive, and the healthiest employment. *Semper vivet!* Labourer. If we take the Latin derivation we infer he should be propped up; labour, from *lubo*, to faint, to fail. Labourers put, or ought to put, their bones and sinews into their work. For the fourth commandment is directed as much to working hard all the week as to resting on Sunday. “Six days shalt thou labour and do all thy work.” Labourer: some derive it from the Greek, and if we take their derivation we should supply them with plenty of good wholesome food. *Lu Bullde*, very much; *βοσος cibus*, food. Therefore a labourer is one who takes and requires a good quantity of food. He does much work; he wants much food. We hear of feeding a horse in proportion to his work. The same principle ought to obtain with the labourer. He has to work hard, and must therefore “keep up his pecker.” *Ev nihil nihil fit*, “From nothing nothing comes.” “An empty sack cannot stand upright.” The man with pendulous gills, like a turkey cock in the Christmas carol, said, “If I go I must be fed.” And if we want our labourers to go ahead with their work, and to have lots of go in them, they too must be fed. We have spoken of the condition of the labourer. We have taken the word painting of some of those who use the darkest colours. We now come to inquire how this condition may be improved. I proceed, therefore, to offer some suggestions, in the hope that they may be largely improved upon and increased by the members of our club. What are the helps and aids that may be afforded to the labourer and his family? 1. “Clubs.” Motto, “Help the poor to help themselves.” Clothing clubs, with good handsome premium added. In our club at Toller Fratrum

and Wynford Eagle we add 7s. to the sum subscribed; and, in order to induce each depositor to strive to work up to a pound, I have this year added 9s. to the 20s. paid in by 20 depositors. Boot club. Here I practice a graduated scale on the principle of the railways. First class, 4s. added; second, 3s.; third, 2s. Blanket loans from November to June. Local charities. I was much delighted the other evening to be able to give each labourer a crown-piece from a parochial charity. I was going to speak of provident clubs, such as Foresters, Oddfellows, our own county club, &c., but the infelicitous new Poor-law, outdoor relief, and such like, seem to choke off all these. Post-office savings banks. Labourers ought to take advantage of these. In my own small parishes, population of both 214, we have over 43 depositors. Mothers meetings. Where women may come to do needlework, and get garments at a reduced rate. The new movement of parochial councils, too, may be made to benefit the labourer by discussing those things connected with his temporal welfare. Our Divine Master, whilst making the soul His great mission, did not neglect the body. Then again the great principle of co-operation, which works so well in towns, should be largely extended to the country; end every village and even hamlet should have its distributive store, where good genuine articles might be purchased at a cheap rate for ready money. The sacred oracles say, "owe no man anything." But this is a command more honoured, I fear, in the breach than in the performance. Debt prevails to an alarming extent. To use the plaintive words I once saw posted up in a shop, in many places they have got tired of all this—"Poor Trust is dead; Bad Pay has killed him." The debts of the people keep co-operative stores from being established amongst them. But by co-operative stores 50 per cent. would be gained in quality, true weight, &c. Be it ours to encourage thrift in the management of expenses, and providence on the part of the labourer. Lord Nelson, at his audit dinner in Hampshire, suggested, with the general concurrence of all the tenant-farmers, that 1s. per week should be added to the wages of all labourers who belonged to a registered provident society. It is well to establish a system of prizes for the best and most productive cottagers' garden, for the cleanest cottage, best roots and vegetables, best bread, and best honey, &c., &c. Privileges. Under this head we may mention skim-milk, at a nominal cost of 1s. a farthing per quart, or, better still, what Lord Nelson recommends to his farmers, viz., to start a system of small cow-lands to be let to labourers of good character who have saved £10 or £20. The privilege of keeping a pig, to supply meat for the cottage table, and manure for the cottage garden. The privilege of keeping poultry, to supply the family with eggs. An egg is generally valued at about 1d.; taking it at this, where can you get a greater amount of nourishment for the money? A little pamphlet has been published this year by Thomas Bosworth, of 198, High Holborn, London, and if we would only realise in actual practice what is set down on the title page, it would be an immense boon. This is what appears on the title page: "To the farmers and cottagers of Great Britain. How the French make fowls pay a profit of 500 per cent. per annum, producing fat young fowls at 3d. per lb. Eggs, winter and summer, at 1d. per dozen, by Kindard B. Edwards." But time would fail me to do more than mention gristling (which is highly esteemed), bee keeping, gleanings, and such like. The farmer, too, might buy backs of pork, cheese, &c., by the hundred weight, and thus get them cheaper, and dispense at cost price to his labourers. In harvest time beer is to be recommended for labourers rather than cider. There is more stay in the former. Liquid largess of some kind has to be dispensed when extra work is required, the old saw says:

"A wet groat goes farther than a dry shilling."

Labourers' dwellings should be constructed with proper regard to health and decency. And it might be desirable that every twelve householders should elect some wise and discreet man from among themselves to be a sort of father to the rest, to look after broken glass, drains, roofs, and various little et ceteras. Owners of labourers' cottages might be required to take out a licence, costing a nominal sum, at the beginning of every year. Each house to be licensed to accommodate only so many as it was capable of doing with decency. A fine to be imposed for overcrowding as in the case of public conveyances. And here let me advocate the use of Moule's system of earth

closets. It is calculated that attention to this system is worth over £1 a head to each person that fully adopts it, to say nothing of its extreme value in a sanitary point of view. Let those who doubt go for a lesson to the common domestic cat. Recent events at Sandringham point to the vital importance of Moule's system of dry earth closets. Attention to all charities that have for their aim assuaging the misfortunes and hardships of poverty, such as hospitals, cottage hospitals, and dispensaries. Talking of health, let me give a practical hint to all of the male sex who have chins capable of growing a crop which should never be shorn. It may be trimmed like a neat hedge, but mown bare with that implement which is fast going into disuse, I mean the razor, it never should be. Example is better than precept. Here is an example—under my nose, and all over my cheeks and chin. Therefore I say to all, come and grow it; begin with the first day of January, 1872, and never shave again; no, never shave again. If my good friends the agriculturists—farmers and labourers—only try my plan of a good, warm, comfortable, costless beard for 12 months, after that time I warrant they will be proof against all inducements to open up daily or weekly scores of pores, through which the cold air permeates, producing toothache and various other ills to which beard growers are seldom heirs. Since Providence gives us males this fine leonine protection, why should we mar His work by depriving ourselves of it? Gratis advice for all men—"Grow your beards; grow your beards!" The conundrum says "A man is thinner than a lath." Why? When? Do you give it up? When he's a shaving! There are many other aids and helps that I can only glance at—thus, technical instruction; fishing-net making, called "breeding"; straw plating; taking in washing, use of Australian meat; mushroom gathering; wool gathering; manure gathering from the roads; glove making. Adam Smith says, "Labour is the source of all wealth." A greater than Adam Smith, "There is much food in the tillage of the poor." "In all labour there is profit."

Mr. GENGE considered that they had just heard one of the most important and able lectures of the session. He gave Mr. Bennett credit for the kind feeling which it was well known the reverend gentleman displayed towards the poor of his own parish, and for the endeavours which he personally, made to anchorate their condition. Mr. Bennett, while enlarging upon the question as to the condition of the agricultural labourer, had made some quotations from the work of an American writer, the picture presented by whom was certainly much overdrawn. Something of what was said by that writer might possibly have been true in a few isolated cases, but his statements were by no means a fair representation of the condition of the agricultural labourer in this county at the present time. He (Mr. Genge) particularly mentioned this county, because a great deal of unjust opprobrium had been cast upon it. He contended that the present condition of the agricultural labourers in Dorset was far better than that described in the pamphlet in question—he thought it would compare favourably with the state of any labourers of the same class, or indeed in any other calling in any part of this country. Mr. Genge reminded the meeting of the many advantages possessed by the agricultural labourer compared with the man of the same standing in other occupations of life; working in the open air he had the benefit of pure atmosphere; if his earnings were a little less he could supply himself with daily necessities at a cheaper rate; he had more wholesome food and beverages at a lower price. Regarding the point as to the amount of remuneration given to the agricultural labourers, were the employers to blame if the standard did not meet the wishes of every philanthropist? Because the labourer said he wanted 15s. per week was he to have it? No doubt the farmers would like their premises and land at a stated rent, but then could they get that? There really had been an immense amount of twaddle, many unnecessary remarks in discussing the condition of the agricultural labourer. In reference to the question of perquisites or payments in kind, it should be borne in mind that in many cases money payments could not be substituted without considerable injury to the labourer himself. Let them for instance take wheat into consideration; it had been the custom to supply it at a reduced rate, and the labourer got a good sample. In saying this he well knew there had been some abuses of the practice, corn of inferior quality being supplied; but then was a good system to be abolished simply

because there were some exceptional cases of abuse? As a rule the master gave a fair sample at a reasonable price. Thus the agricultural labourer had a good wholesome loaf of bread. Respecting the question of liquor the rev. gentleman appeared to recommend in the latter part of his lecture what he condemned in the first part. Mr. Genge asked who could supply to the labourer ale or cider at a cheaper rate than could the farmer himself, who bought or made it wholesale? Was it not better to get it from the farmer than in small quantities from the public-house keeper? He submitted that the practice of supplying to the labourer a good wholesome beverage, that which the farmer consumed himself, was in itself commendable. Coming to the matter of dress the vice-president remarked, there were not wanting instances of the agricultural labourers, their wives and daughters, apparently stepping above their station in life. It was quite true that one-half of the world did not know how the other half lived; but the labourers had money for dress, and they would have finery with it. He thought the value of a man's earnings depended a great deal upon the management of the home, the manner in which the money was spent. While in one house everything was clean and comfortable, with everything that could be desired, in the adjoining house, although the earnings were more, yet all was uncomfortable, the sole fault being in the habits of the occupants themselves. A good deal has been said in the way of recommending that the labourer should have land and be allowed to keep a cow. Now that was thoroughly impracticable. He knew that fault was found because of the extent of unencultivated land. Mr. Mechi spoke of the amount that could be brought into cultivation. But supposing that the labourer saved say £10, was it practicable that he should have a portion of land and a cow? Why, would not the cow bring him into debt? What could be done with the animal when it did not produce milk? It would then be no benefit to the labourer. As for poultry it should be remembered that the labourer should not be led into temptation. If he kept poultry a very great temptation would be presented to him, because on passing the corn ricks and so on, he would feel strongly inclined to fill his pockets—boots had at times been used for such purposes—so as to carry home a little for the birds. Of course this would not be the case in every instance; on the contrary labourers as a rule were honest and trustworthy—still to keep poultry would be to offer temptation, and the practice should therefore be discontinued. Mr. Bennett recommended that the labourers should be afforded the opportunity of buying necessary articles at wholesale prices; that to some extent was already the case. Still much more in that respect could doubtless be done. He firmly believed that a gentleman situated in a parish as was their reverend friend, had the means of doing a vast amount of good. He knew that at Puddletown what were called local charities had been freely distributed this Christmas, and he thought they had proved highly beneficial. If clergymen would interest themselves as Mr. Bennett had done in the formation of clothing clubs and such like institutions, the condition of the agricultural labourer would no doubt be very much improved. In conclusion, Mr. Genge said they had to thank the rev. gentleman for the considerable trouble which he had taken in the matter, and for the good intentions he had evinced.

Mr. R. DAMEN (the Mayor of Dorchester) did not exactly agree with all that Mr. Bennett had said; he rather adopted the views to which Mr. Genge had just given utterance. There was, however, one part of the lecture which had his entire approval—that with regard to the Dorchester hiring or “mop” fair. This town was not exceptional in that respect, for he remembered that at Newcastle there was also a great “mop” fair. Thousands of persons from all parts of the country congregated there, special trains running the previous day. Men and women, servant boys and girls, mixed indiscriminately together spending the night in the town and returning to their respective homes the day after the fair, which was the greatest curse that the county of Northumberland had. More characters were lost on fair night than in all the other parts of the year. He thought then that it was the duty of every right-feeling man placed in the position of their friend the lecturer, to discourage in every possible way such a system as that in question, which led to no good. Regarding labour, it had always been and was still a difficult question. The political economist averred that the remuneration in the labour market was ruled

by supply and demand—and no doubt in some measure labour would be paid for according to that principle; still he (Mr. Damen) gave the employer credit for being influenced by higher feelings than that. In many cases labourers were engaged for say 30 years for all the year round, through winter and summer alike, irrespective of wet days, and pecuniary loss was thus often sustained by the employer, who knew that, without such consideration the wives and families of his men could not exist. He (Mr. Damen) was sure that the best possible feeling prevailed on the part of the employers. He had had considerable experience of country life, and he was also pretty well acquainted with the employment of labour in the towns; and having this advantage he could confidently affirm that the agricultural labourers were infinitely better off than the town labourers. Let them for a moment contrast the former with some of the working men who lived say in the Fordington parish. Many of the town labourers when they had no work were starving. Those employed by the builders and so forth earned at the most 2s. per day during the summer, and they had no extras in the shape of cottages, gardens, or fuel; no cider in harvest, as had the agricultural labourers. The town labourer, in far too many instances, lived in some miserable cottage or lodging that was a disgrace to the owner and occupier alike. From conversations he had held with persons in this and various counties he was sure that the agricultural labourers were better paid, were better clothed, and had more comfortable homes than was the case years ago; this was especially the case with regard to Dorset. Everybody knew that. He thought nobody could look at the agricultural labourers without concluding that their condition was superior to that of the same class of men 30 or 40 years ago. Personally he wished that they were better housed; still a great improvement had already taken place in that respect. He was quite certain that progress was being made with regard to their general condition. Referring to the question of dress Mr. Damen spoke of the extent to which broad cloth has been substituted for the white smock-frock now so seldom seen on Sundays, while as regards the gentler sex there is the difficulty of distinguishing servants from ladies. Throughout the country the improvement as to dress here indicated had, he said, been witnessed. On every hand progress was made. At the same time he wished the progress was more rapid; however they must take things as they were. There was another point. As a rule were not men paid as well as their employers could afford to pay them? He knew from an agricultural point of view, for some years past the farmer had been positively paying for labour more than he could afford. Mr. Damen alluded incidentally to the difficult question of emigration, which is set down as a great remedy for the evil complained of—low wages—and, concluding his practical remarks, observed that although the population of the country is at present double what it was at the beginning of the century, yet all classes of the community are better clothed, better housed, and superior also in many other respects.

Mr. G. WOOD HOMER thought that meeting a body of farmers such as the Dorchester Farmers' Club the rev. gentleman had shown considerable pluck in coming forward with such statements as those which he had quoted from the pamphlet in question. He did not think that Mr. Bennett really believed that his quotations were accurate; the rev. gentleman had identified himself too much with the rural population to believe for one moment the statements advanced by Mr. Miall—doubtless he now brought them forward in order that they might be satisfactorily refuted. (Mr. Bennett: Hear, hear.) Let the truth be spoken about the matter, and let not such statements uncontradicted go forth to the public. Mr. Bennett had said: “Let justice be done.” Now the way in which that could be done for the landowners and occupiers, chiefly the former, was to see that the poor in their respective districts had work. To do justice to the poor man was, he argued, to find him employment at satisfactory wages. In this country there were hundreds and thousands of acres requiring improvement, which work would pay 5 per cent. Yet it was not done. He did not know why. Mr. Miall probably would explain that the law of promiscuity was the reason; he (Mr. G. Wood Homer) did not think it was. There was one improvement as to the expediency of carrying out which, there could, he thought, be no manner of doubt—he referred to cutting straight and deepening the river courses. That would be a satisfactory work in winter, one which would pay well. It seemed

as if the attention of landowners had not been sufficiently drawn to these matters. There was a glaring impediment in the way of improvements being executed. They were no sooner done than they were immediately assessed to heavy local burdens. Let a man improve his land and down comes the Assessment Committee, taxing him 3s. or 4s. in the pound. That stopped a great deal of improvement in land. The rev. lecturer has alluded to the rate of wages paid in this county, mentioning 8s. per week. Now he (Mr. Homer) did not think any man would for one moment believe that figure was the standard of wages in the county of Dorset. In one instance to his own personal knowledge 10s. per week was paid, and the greater part of the year the rate, in consequence of perquisites, far exceeded that sum. Speaking on the advantages of cottage accommodation, Mr. Homer mentioned that while he let a habitation for 2s. 6d. per week to a man who did not work for him, he let the adjoining one, which had a larger garden attached, for 1s. weekly, although it was worth 3s. 6d. Thus he allowed that man 2s. 6d., about which nobody had anything to say. Then again fuel and potato ground were found. Regarding the latter perhaps there might occasionally be a direful failure in the crop, prejudicial to the labourer; but then the farmer himself had at times to suffer from a failure in the wheat crop. He had been afforded the opportunity of talking on the subject of the remuneration of labourers to the farmers of Essex, Wiltshire, and other counties, and had found that if weekly wages in Dorset were a trifle below in nominal amount those given in the other counties in question piecework was paid for rather higher in Dorset. Regarding the Candelmas fair the rev. gentleman had done well to draw attention to the subject. The system of hiring there was undoubtedly wrong, and as such should be abolished if possible. He thought that the suggestion to sign an agreement not to hire there would, if carried out, have a good effect. It might be a conditional agreement. Some gentleman had thrown out the hint that those labourers who had no business at the fair should not be allowed to visit it. That, he thought, would be well to carry out, for such parties would only go to swell an idle throng. The rev. gentleman had laid considerable stress on charity. Now he (Mr. Homer) was not very fond of charity if by that was meant indiscriminate alms-giving, or he might go so far as to say even that rather of a discriminative nature. He preferred that a man should have plenty of work with good wages, to the plan of allowing him skimmed milk, or what was left in the kitchen. Respecting the proposal that every labourer should be permitted to keep a cow, he said that if such were adopted on his own farm he should have 30 cows running about. Pray how were they to be kept in winter? The labourers keeping cows would require ground for the making of hay. Mr. Homer was afraid that the plan would by no means be found a paying game in the end. He looked upon it as a step in the direction of a retrogressive policy, and recommended as a true help to the labourer the system of granting garden ground on which he might grow his own crops, which he considered rather progressive than otherwise. He approved the suggestion to establish the plan of co-operative stores, speaking of the bugbear debt which so often keeps down the labourer. Respecting drunkenness it was, he said, a sad evil, ruining many of the country people, but not to such an extent as it ruined the town people. He thought the cure for that was a judicious licensing bill, which he hoped some Government, whether Liberal or Conservative, would have the pluck to bring forward notwithstanding the opposition of the brewers. In the dwellings of the poor there had, he thought, been a marked improvement. He thought that subject must be dealt with irrespective of £ s. d. Cottages would not pay a per centage; but, nevertheless, it was the duty of the landowner to provide proper accommodation for those living upon his property. He thought the suggestion of Mr. Bennett that a cottage might be licensed to hold so many persons was well worth consideration—if a public vehicle were thus regulated, why not the cottage? But this seemed to him to affect the town population in a greater degree than the agricultural; where there was one poor helpless boy in the country requiring such protection there were 50 in the town. In the cottages of this county especially there had been great improvement; no one could take a long drive in the neighbourhood of Dorchester without seeing abundant evidence of that gratifying fact. There were, for instance, good model cottages at Puddletown—during the

past few years wonders had been done there. He did not think that in all these things they must expect to go so fast as some persons seemed to imagine. However, great improvement had been going on; he hoped they would still keep progress in view, although, perhaps, they might not find it expedient to go at railway speed.

Dr. ALDRIDGE endorsed what had been said by Mr. Genge and other speakers. There had been uttered, he observed, a great deal of maudlin sentiment with regard to the condition of the agricultural labourer. As lovers of their country it was, he thought, their duty to look forward to every link of the social chain. In his own recollection the condition of the agricultural labourer had been wonderfully improved. It would, indeed, be improved to a still more surprising degree if the romantic and Utopian ideas of some persons who knew nothing on the subject were carried out—the tenant-farmer would not be able to live. At the present time the landlord did not realise more than three per cent. on his land, and that he thought was not too much. The tenant-farmer could not afford to give an increased rate of wages, seeing that the condition of the agricultural labourer had already so much improved. He did not see any reason why there should have taken place so much excitement on this subject. There was one direction in which improvement could be effected, and that was education, in regard to which great disgrace attached to this country. Mr. Childers, recently speaking on this subject, mentioned that on passing through Germany he saw 800 recruits who had come from Berlin, and there were only three of them who could not read or write; the authorities asked why on earth that was allowed? How different the condition of things in England in this respect! Dr. Aldridge thought that while the privileges of the franchise were bestowed upon the labouring population, while their interest in the welfare of the Constitution was increased, they should be proportionately educated, in order that they might be able to adequately discharge the heavier responsibilities of their station in life. At the same time he was no advocate for an excessive education; that was out of the question—it would be productive of evil instead of good. Labourers should not be imposed upon by being compelled to pay excessively for everything in the shape of food or clothing. The co-operative system met with his cordial approval; it would, he believed, be a great boon to the agricultural poor. As to the question of intemperance, he looked with disfavour upon any plan for putting down the evil by Act of Parliament. He thought the privileges of the poor were as sacred as those of the rich. Any compulsory measure affecting exclusively the poor would, he thought, be a great hardship. The poor man often resorted to the public-house not for the purpose of getting drink, but for the sake of enjoying a little social company, and he (Dr. Aldridge) advocated the increase of attractions counter to that in question, laying particular stress on the importance of imparting a suitable amount of instruction.

Mr. G. WOOD HOMER explained it was in this way that he looked upon a licensing measure as to some extent curing drunkenness. He thought that if the ale, or the national beverage, could be obtained easily and readily over the counter in the same way as was the loaf of bread, so that the labourer could take it to his own house and consume it, that alone would obviate drunkenness. That was his reason for looking upon a licensing measure as to great extent remedying the evil of intemperance.

Mr. ANDREWS (the secretary) attacked Mr. Miall's pamphlet, exposing in some glaring inconsistencies in the statements put forth by the writer. He showed that agricultural labour is popular because of its many advantages, and defended the employers from the charges made against them, while admitting there were "black sheep in every flock." He contended that in Dorset the agricultural labourers were as well paid as in any other county. He pointed out that within 40 lines of his pamphlet Mr. Miall confutes his own argument. He did not mean to say that they had the same amount of money, but that they had advantages proportionate to money.

Mr. CHAPMAN SAUNDERS believed that the labourers in this county were as well paid as it was possible for the tenant-farmer to pay them. The value of labour depended in a great degree, he thought, upon the law of supply and demand. Respecting the hiring fair, he believed they all would be glad if it were abolished, but the question was, he pointed out, a difficult one to deal with. He suggested that the agreement should

be signed on the condition that say three, four, or five hundred other farmers did the same. It was very easy to say the fair should be done away, but in his own opinion that was not so easy to accomplish.

Mr. H. W. HAWKINS, who had been in the habit of paying by piece work, mentioned that he had given as much as 30s. per week for mowing; he strongly repudiated the statement that wages amounted to only 8s. weekly. By an amusing anecdote showing that agricultural labourers could not on one occasion which he mentioned be identified in church in consequence of their wearing black coats instead of smock-frocks, he corroborated what had been said with regard to the improvement that had taken place with respect to dress. In reference to bad language, he had not heard it on his own farm, and he did not think that farmers of the 19th century were in the habit of swearing.

Mr. GENGE expressed his opinion that no one should shrink from signing the agreement in regard to discountenancing the fair. He thought that if it were an abuse they must try to do away with it; there must be a beginning.

The PRESIDENT, in summing up the observations of the various speakers, expressed his own opinion, as a practical farmer of some 40 or 50 years' experience, that the expenses of employers were now double what they were 20 years ago, which showed plainly, he thought, that wages had considerably advanced. The cottages, too, had exceedingly improved within the last ten years. With regard to paying in kind he had himself, when wheat was down to £10 per load, tried to altogether stop the "gristing"—which the men always had—and to pay in money; but all said "No." They had two bushels to a sack of wheat monthly for their families. They had 60lbs. of wheat for 5s., so that their bread cost them only 5d. per loaf. They paid only 1s. per week for rent, besides which they had various perquisites, such as fuel, gorse, and coal. Then, too, they had "tut" work during the year. With respect to drink his own men at one time always had it at the house; but afterwards he allowed them £2 per year, and then they never came to the house at all. On the whole he thought that the price of labour was now fully 2s. per week higher than when he began business, and other things were proportionately higher; all the "tut" work was much higher. It could be plainly seen that the condition of the agricultural labourer had im-

proved considerably during the last few years. He could not see in the least why stigma should be cast upon this county as paying less for labour than was paid in other counties of England. He was certain that the agricultural population was at present in a far better state than 20 years ago. He thought they ought to thank Mr. Bennett sincerely for the able manner in which he had brought forward the subject.

Mr. DAMEY strongly recommended the Club to set a good example by signing the paper without the least hesitation.

The Rev. T. BENNETT read a letter from Mr. W. H. Dunman, of Troytown Farm, who most cordially approved of the movement, setting forth in forcible terms the evils associated with the fair. Mr. Thomas Pouncey, of No. 3, Cornhill, Dorchester, had also expressed his willingness to keep open his registry office for the purpose of meeting the wants of both employers and employed in the county. He had no doubt that at other such offices similar facilities would be offered. His brother clergymen were dead against the hiring fair, and his individual opinion was, that the movement to put it down would be more likely to succeed if it originated with the farmers themselves, and not with the clergy, who, however, would do all in their power to promote it. Now he thought was the time for action. It was better rather than cider that he recommended. As for his own practical knowledge on farming it had once been said of him "They spoiled a good grass farmer and made a parson of you." In Ireland he had found that cow keeping as adopted by the labourers there was profitable to them. [Mr. G. W. Homer: I suppose land was rented there by the mile?] His own congregation at Toller Fratrum, included many smock-frocks, which he really admired. He endorsed what Dr. Ailridge had said in reference to education. He was pleased that co-operative stores had met with their approbation. Respecting the use of bad language, they all, he said, had little tempers of their own, and it was as well to keep themselves in check.

On the motion of the President, seconded by the Vice-president Mr. Bennett was accorded a vote of thanks. The following was signed by nearly all present: Declaration against Hiring Agricultural Labourers at the Dorchester Candelmas Fair.—We, the undersigned, hereby pledge ourselves to use all our endeavours to prevent the hiring of any farm labourers or other servants at the Dorchester Candelmas Fair.

THE AGRICULTURAL LABOURER.

At the December meeting of the Croydon Farmers' Club, there was a large attendance. Mr. Robert W. Fuller in the chair.

Mr. LEVISON-GOWER read the following paper:—I have for some time felt it due to those who did me the honour to elect me a member of the Croydon Farmers' Club that I should contribute something to the many useful discussions that have from time to time taken place at these meetings, and although my friend Mr. Stables somewhat quickened my pace, I may say, with all honesty, that it had been my intention to offer to read a paper during the present season. In glancing through the subjects that have been discussed I found that that of the condition of the agricultural labourer was one that had never been before you, and although I feel that it is so large a one that it is impossible to do adequate justice to it, it is at the same time one of such vast importance to the prosperity of agriculture—in fact, I may say it so underlies the whole question—it is, so to speak, the sub-structure upon which the whole fabric rests—that I feel justified in introducing it to your notice this evening; and however far I may fall short in doing justice to it, I shall be amply rewarded if I can provoke an interesting and profitable discussion upon the question. Now, there can be no doubt that the condition of the agricultural labourer has very much improved during the present century. Whether his condition has improved in an equal degree with those of other classes it will be our business presently to inquire; as also into any causes which may exist to retard that improvement, and the remedies that may be suggested. A short inquiry into the early condition of the agricultural labourer may not be without interest at the outset. *Villainage*. Under the Saxon government there were, as Sir W. Temple tells us, a class of persons in a

condition of downright servitude, used and employed in the most servile works, and belonging, both they and their children and effects to the lord of the soil, like the rest of the cattle or stock upon it. Under the Normans their condition was somewhat improved, and the system of villenage obtained, by which, although they were annexed either to the land or to the lord of the manor, and were transferred from one owner to another, still they were under the protection of the lord, and in turn for their services received certain favours from him. The last we hear of the villein by name is in Ric. II.'s time, the end of the 14th century, and by the time of Hen. VIII. villenage had practically ceased. The process by which the labourer arrived at his present condition, viz., that of working for a fixed day's wages, was a long time in developing itself, and it is not till 1581, the time of Queen Elizabeth, that we find the agricultural labourer as he now exists beginning to appear. Some interesting details of his condition in the time of Queen Elizabeth are given by Mr. Froude, in his History of England, Vol. I. At this time, although practically a free man, and allowed at full age under certain restrictions his own choice of master, yet the restrictions on masters and servants were so severe as to prevent either from taking advantage of the necessities of the other, or from terminating through caprice, or for any insufficient reason, a connection presumed to be permanent. The English labourer of the early part of Henry VIII.'s reign is described as of a sturdy, high-hearted race, sound in body, and fierce in spirit, furnished with thews and sinews, which, under the stimulus of those great shins of beef, their common diet, were the wonder of the age. "What comyn folk in all this world," says a State paper 1515, "may compare with the comyns of England in riches, freedom, liberty, welfare, and all

prosperity? What comyn folk is so mighty, so strong in the fields as the comyns of England?" "The artificers and husbandmen," says Harrison (Dec. of England), "make most account of such meat as they may soonest come by, and have it quickest ready. Their food consisteth principally of beef and such meat as the butcher selleth—that is to say, mutton, veal, lamb, pork, besides souse, brawn, bacon, fruit, pies of fruit, fowls of sundry sorts. In feastes the husbandmen do exceed after their manner, especially at bridal and such odd meetings where it is incredible to tell what meat is consumed and spent." The Spanish nobles which came into England with Philip were astonished at the diet which they found among the poor. "These English," said one of them, "have their houses made of stick and dirt, but they fare commonly so well as the King." In this respect, I fear, there is a great falling off in the present day. Mr. Froude says that the state of the labouring classes can best be determined by a comparison of their wages with the price of food. He says that in Queen Elizabeth's time the majority of agricultural labourers lived in the houses of their employers, but still many had cottages of their own. He calculates that a penny in the time of Henry VIII. was equivalent to a shilling of our money. The wages of a common labourer in 6, Henry VIII., were 4d. a-day for half-year; for the remaining half 3d. A common servant of husbandry also was boarded and lodged at his master's house, received 16s. 8d. a-year in money, with 4s. for his clothes; while the wages of the out-door labourer in constant work would have been £5 a-year. In the harvest months they were allowed to work by the piece and might earn considerably more; mowers, for instance, earned 8d. a-day, so that, in fact, the day labourer, if in full employment, received on an average 4d. a-day for the whole year, or, in our money, 4s.; allowing him to work regularly five days a-week he received 20s. a-week, the wages at present paid in English colonies. And this was not all his advantages: he generally held land in connexion with his house, while in most parishes there were large tracts of common where pigs might range, and ducks and geese or sometimes a cow, and, from the vast tracts of forest, wood was very plentiful and cheap. During the first three-quarters of the 16th century, says the same author, the working classes of the country remained in a condition more than prosperous. They enjoyed an abundance far beyond what the same class were enjoying in France or Germany. The average price of wheat was 6s. 8d. per qr., barley 3s., beef and pork were 0½d. per lb., *i.e.*, 6d. of our money; fat oxen were sold for 26s. 8d. a piece (*i.e.*, £16), fat wethers for 3s. 4d. (40s.), fat calves the same, and fat lambs 12d.; the best fat pig or goose in a country market could be bought for 4d., a good capon for 3d. or 4d., a chicken for 1d., a hen for 2d.; strong beer, such as we buy for 18d. a gallon, was then a penny (*i.e.*, a shilling), and table-beer less than 0½d.; French and German wines were 8d. a gallon. Rent, another important consideration, is difficult to fix accurately, but in the case of the cottager it was very small. "The great criterion," says Lord Macaulay, of the state of the common people is the amount of their wages. No less than 4-5ths of the common people were in the seventeenth century employed in agriculture, and Sir W. Peter informs us that a labourer was by no means in the lowest state who received for a day's work 4d. with food, or 8d. without. Four shillings a week were, therefore, according to this calculation, fair agricultural wages. About the beginning of 1685 the justices of Warwickshire, in the exercise of a power entrusted to them by an Act of Elizabeth, fixed at their quarter sessions a scale of wages for their county, and notified that every employer who gave more than the authorised sum, and every working man who received more would be liable to punishment. These wages they fixed from March to September at 4s. a week without food, and from September to March 3s. 6d. Then, as now, the wages varied in different counties. Warwickshire may be taken as about an average, but some counties were better off. The wages in Devonshire were 5s. in winter, 6s. in summer without food. In 1661 the justices at Chelmsford fixed the wages of the Essex labourer without board at 6s. in winter, and 7s. in summer, but in this year the necessaries of life were immoderately dear. Wheat being 70s. a quarter. In the whole of Charles II.'s reign peasants' wages did not exceed 4s. Macaulay sums up thus, seeing that none of the necessaries of life have doubled in price since the 17th century, while many have become decidedly cheaper, he

concludes that labouring men were in that age worse off than at present in all material respects; that they were worse lodged, worse clothed, and worse fed. This opinion, as we see, differs very materially from that of Mr. Froude, and although both descriptions are probably rather coloured according to the bias of the writer, Mr. Froude's is, it would seem, nearer the truth. Mr. Thoroton, in his well-known work on labour, criticises with much force Lord Macaulay's statement. He says: "During the time that that historian contrasts with our own lived Daniel Defoe, the most minute, careful, and comprehensive of observers. One subject which he investigated with peculiar interest was the condition of his poorer countrymen, and his remarks disprove Lord Macaulay's. Although in Yorkshire and Durham a labourer's weekly wages might, he says, be only 4s., in Kent, and in several of the southern and western provinces, they were 7s., 9s., or 10s. Often when Defoe wanted a man for work, and had offered 9s. a week to sturdy varlets at his door, he had been told to his face that they could get more by begging; and once," says he, "I put a lusty fellow in the stocks for making the experiment." Again, he represents himself as habitually paying six or seven men on Saturday night—the least 10s., and some 30s.—for work; and he mentions one man who for several years gained of him from 16s. to 20s. a week by his handiwork, at the mean, scoundrel employment of tile making. The high wages were not turned, he says, to the best account; they were higher than in any other country in the world; but, whereas a Dutchman with 20s. a week would be sure to grow rich, and leave his children in very good condition, an Englishman could only but just live—might, perhaps, hardly have a pair of shoes to his feet or clothes to cover him, and might have his wife and children kept by the parish. But this was caused entirely by the extravagant manner of our poor people in eating and drinking, for they ate and drank—but especially the latter—three times as much in value as any sort of foreigners of the same dimensions in the world. If it had not been for the ale-house everyone might have lived comfortably, for there was more labour than hands to perform it, and the meaneast labour afforded by the workman sufficient to provide for himself and his family. These are striking remarks, written nearly 200 years ago, and may confidently be relied upon for their accuracy. "If," says Mr. Thornton, "instead of confining our attention to the end of the 16th and 17th centuries, we were to go back to the times of the Tudors and Plantagenets, we should find reason to assert still more strongly that the course of the English labourer has been retrograde instead of progressive. We should find a period at which wages were twice or thrice as high as the rulers conceived to be good for them, and when laws were deemed necessary to check their self-indulgent propensities, and to restrain their transgression in diet and dress—when, accordingly, carters, ploughmen, and other servants in husbandry were gravely admonished by Act of Parliament against eating and drinking excessively, and special statutes were passed against the using materials of clothing of higher price than might now suffice for the purchase of silks or satins. Parliament decreed that they were to be entitled to only one meal a day of flesh or fish, and directs them to content themselves at other meals with butter, cheese, and other such victuals." It seems clear, therefore, that the wages of labour estimated in money were in 1685 not more than half what they now are, and that most articles of necessity to the working man were more than half as dear as at present. Beer was cheaper, so was meat, but wheat was dearer, and the majority lived on rye, barley, and oats. Passing on to the days of Queen Anne, what I consider the condition of the agricultural peasantry was at its best, then it was, says Lord Stanhope, that the harsh features of the feudal system had passed away, while some of the milder ones remained. There was no trace of serfdom or compulsory service, but there lingered the feeling of protection due by the lord of the soil to his retainers in sickness or old age. Labour was then no mere contract of work done for value received. Service was still in some degree required even when it ceased to be performed. The enclosure of commons, which did not come much into force until George II.'s reign, have no doubt been to the disadvantage of the labouring class. Formerly whoever wished to build a cottage might squat himself down on one of the many tracts of waste which then constituted a quarter of the kingdom and build himself a dwelling, which he occupied rent free,

and to this was added a garden of no inconsiderable size, while the adjoining common supplied grazing for a cow, for pigs, or geese, thus enabling him to supplement his wages. But it will not do to be led further into the historical or antiquarian part of the subject. Our business is with the present condition of the agricultural labourer. Although from what has been said there can be no doubt that there was a time when, as a class, they were better off than they are now, still, looking at their condition as it is now and as it was at the beginning of the present century, there has been, no doubt, a marked and constant progress since that time. The close of the last century and the first 25 years of the present mark, I think, the worst epoch in his history. The price of provisions was exorbitant, the rate of wages was low, no improvement had been made in his dwelling, no provision for his education; the poor-law, such as it was, was unequally administered, the poor-houses a sink of misery and immorality. It seems to me, in reviewing the history of the agricultural labourer, that the greatest evil that has happened to him has been the loosening those ties of inter-dependence which formerly bound together the employer and employed. The majority of labourers lived formerly in the houses of their employers, and formed part of the family; a good feeling was thereby engendered, their interests and that of their employers were identical, and this no increase in the rate of wages can make up for. The system now is completely altered; the farm labourer has been almost universally turned out of the farm-house, and until lately, when something has been done to provide cottages on the farms, he has had to walk long distances morning and evening to his work. But it is on the young man—the unmarried labourer—that the change has worked most prejudicially. He has to find a lodging where he may, and this is usually at some of the worst cottages in the district, the better class of landowners as a rule refusing to allow their cottage tenants to take lodgers. His evenings are spent as a rule at the public-house, where the seeds of intemperate habits are laid for his future life, and more than all this, the want of a home has been the fruitful source of those early marriages which are the parents of so much misery among the labouring poor. So great an evil was this considered that in the middle ages a statute was passed forbidding these early marriages. We must, however, accept things as they now are. We can never expect to see the time when the labourer shall be fed and lodged as heretofore in the house of his master. We must accept the fact that agricultural labour is to be like any other labour, a mere question of contract between employer and employed; that the relation between them need not be a personal one, but simply so much work for so much wages. I shall proceed to consider the question from this point of view, and endeavour to point out the way in which I believe the condition of the agricultural labourer may be improved. It is a very general remark that farmers do not get the same amount of work out of their labourers as they used to do; in fact, that the labourer has materially and morally deteriorated. I believe this to be to a certain extent true, and various causes are no doubt at work to produce it. There is in the first place that want of interest and individual acquaintance between the farmer and his men to which I have before alluded. Many of the best hands are tempted away to the large towns by the prospect of higher wages and better hiring. There are numerous sources of employment open to them of which our fathers knew nothing, the alteration in the law of settlement, the ready means of locomotion, the spread of education—all these causes, combine to take away a good many from the field of agricultural labour who would otherwise be found there. There are very few agricultural parishes in which the labour market is overstocked, and if we look at the census returns they supply undoubted evidence of the great migration that takes place from the country to large towns—whereas in the former the population is nearly or quite stationary, in the latter the increase is most enormous. Is the same amount of labour required now as formerly on the same quantity of land? I believe not. The amalgamation of farms, the grubbing of hedgerows, and uniting of fields, the larger amount of land laid down in grass, the introduction of machinery, these all tend to reduce the number of labourers required. I am not now going into the question of small and large farms—of peasant proprietors or large landowners. I can only take things as they are. I see a general tendency to increase the size of agricultural holdings,

and to adopt machinery in every branch of farming to which it can be applied. But I am far from believing that a very general introduction of machinery will be to the disadvantage of the labourer. I believe that it will enhance his value and raise his wages. Evidence goes to show that the best drivers of agricultural engines are taken from the labouring class, and the rate of wages is 20s. to 23s. per week. It will be an incentive to the agricultural labourer to provide a better education for his children, and to keep them longer at school. If you have gone along with me far you will, I think, agree with me that the condition of the agricultural labourer is not on the whole satisfactory. We have a growing dissatisfaction among them at their condition, an uneasy restlessness which leads them to be constantly changing their situations, a lack of interest in their employer's concerns; among the lads independence, among the girls a love of finery and a dislike to hard work. How shall we bring about a better state of things? Is the following description, taken from an article in the *Cornhill Magazine* of February, 1864, entitled "The Life of a Farm Labourer," altogether a romance? is there not much truth in it? "He is taken from school as soon as he can earn 4d. or 6d. a day on the farm. He forgets all he has learnt at school as fast as other boys do. His next step is a team boy at 4s. or 5s. a week. After passing through the half dozen violent attachments which matrons denominate "calf love," he is seen one fine morning before he is 22 on his way from church with his bride, who is only 17. Their first quarters are two hired rooms, and here for a while they get on pretty well, for the husband's earnings are 14s., to which the wife on an average adds 2s. They do pretty well as long as they have only one child, but the family cares of young people are apt to increase rapidly, and in a ratio of nearly annual arithmetical progression. So in the third year of his married life they are obliged to remove into a cottage of their own, and find themselves a few years after with half a dozen children to maintain, with rent and fuel to provide, and clothes to be paid for. Hard is the struggle, and hard the life the parents lead in consequence. A bit of bacon is the nearest approach to flesh meat ever seen in the dwelling; and bread and cheese and an onion, washed down with so-called tea, as often as not his principal and midday meal. Being disabled by hard fare and exposure he is at 50 years of age no longer worth 2s. 6d. a day, and is reduced to 2s., then to 1s. 6d. Then follows sick and the benefit club, to which he had formerly subscribed, having broken up, his only resource is to apply for out-door relief, to be exchanged shortly afterwards for an asylum in the sick ward of the union. Once within those walls they are there for life. They have sold their furniture and must make up their minds to wait patiently, until death shall come to set them free." It was long ago remarked by Sir Josiah Child, that to benefit the condition of the poorer classes was deserving the most serious consideration of our wisest counsellors, "and if a whole session of Parliament were employed upon this singular concern, I think," says he, "it would be time spent as much to the glory of God and good of this nation as in anything that noble and worthy patriots can be engaged in." The remedies that I shall venture to suggest are not legislative enactments (in such matters I am no believer in legislation); they will be such as tend to improve their condition morally and physically, and such as lie within the reach of almost every owner of cottage property or employer of labour. Before all improvements, whether in men, dwellings, their education, or their rate of wages, I look to the cultivation of a friendly feeling between the employer and employed. One of the great evils that we have to lament in the present day is the estrangement that exists between the classes. When the work is done and the wages paid it is considered that the obligations have been fulfilled on both sides; there is no personal intercourse between the families. How often as soon as the labourer is thrown out of work his wages are immediately stopped and he is cast upon the rates, when in the case of a mere temporary ailment how much kindly feeling would be engendered by the employer continuing to pay the wages! Can it be wondered at that under the circumstances complaints should be made of the constant change of situation, or that the labourer, on the chance of bettering himself, should change his employment? Foremost among the improvements always suggested is that of providing the labourer with a comfortable home at a moderate distance from his work. The moral and physical

condition of the labourer is very much determined by the state of his home; if we would draw him from the public-house it must be by his having a comfortable home to go to after his work—a home in which he can take a honest pride. Lord Shaftesbury (and no one can claim to speak with greater authority) remarks that of all the physical questions which affect the condition of the labouring classes, there is no one point of so much importance as the condition of the dwelling-places where they and their families reside. There can be no question that of late years great improvements have been made in the matter of cottages, especially upon the large estates. The difficulty, however, which underlies the whole question, and seriously interferes with its further development, is that of expense. It has not yet been shown how superior cottages can be built to let at such a rent as a mere agricultural labourer can afford to pay. Cottage building can be rendered profitable in towns, because houses can be built relatively cheaper by building them in a row, and they will always command a large rent. But in country districts it is not so good. A good pair of cottages, detached with suitable offices, cannot be built under £300. The highest rent that I consider a labourer in receipt of 13s. or 14s. a-week is capable of paying is 2s. a-week, or £5 to £5 5s. a-year. Now the lowest rate of interest which a builder expects is 6 or 7 per cent. upon house property; this would give £18 per annum, whereas the actual rent is £10 10s., or only 3½ per cent. Then to that has to be added a poor-rate of some 10 per cent., and it will be seen that the real drawback in the way of cottage improvement is expense. Several letters have lately appeared in *The Times* between Mr. Granville Ryder, the Secretary of the Lands Improvement Commissioners, and Mr. Walter Compton, one of the Agricultural Commissioners, in which the latter pointed out, and I think very truly, that the money offered by the Lands Improvement Society had not been taken advantage of by landowners as it would have been, owing to the stringent requirements. In the first place they require three bed-rooms in every case, and it is manifest that this cannot be necessary. Secondly, they will not allow any money in repairing or adapting old cottages, whereas it is very well known that some of the most comfortable cottages can be made out of old dwellings by additions and alterations. These causes no doubt operate to interfere with the usefulness of the society, and I trust that in time they may see fit to relax the stringency of their rules. I may claim to speak with some experience about cottage building, having this year completed the 20th cottage I have built on my estate. They do not pay above three per cent., but there are indirect advantages which to a great extent make up for the outlay. The farmer is able to obtain and to keep a better class of labourers, and the value of the farm is thereby increased. It must be a manifest advantage both to the labourer and his employer, that the cottage should be on the farm; but this is introducing a new system, and it is clear that a long period must elapse before the improvement in the cottage dwellings of the poor can be carried out to the extent which is desirable. Mr. Cullley, in his second report, quoted by Mr. Dent (*Art R.A. Journal*), says, "We are calling on the landowners of to-day to remedy the evil growth of many past generations, and 9-10ths of those who reside in the four counties I have visited, are already busy at the work as far as their means will allow. I could point out two very large estates in these counties (*i.e.* Derbyshire, &c.) upon the general improvement of which, cottages having a large share, the whole income has been spent for many years past." Mr. Dent says, "English landlords will not shirk their work, and they are generally recognizing the improvement of cottages as a part of their duty essential for the good cultivation of the land, as well as for good morals, and every one who travels through the country sees not only commodious farm buildings, enlarged fields, and higher cultivation, but also well-built and commodious cottage dwellings rising among the squalid homes which even yet disgrace our land." I confess I wish that the act which relates to the condemning certain houses in great towns as unfit for human habitation, and orders their repair or demolition, could be extended to the country districts, and especially I wish that some remedy could be brought to bear upon that system of overcrowding, which is not only detrimental to health, but undermines the morals of the working classes. The next essential in my opinion is that

the cottage should have a good garden attached to it, and this in country districts can be done at very little sacrifice. So important was it considered formerly that the cottager should have a good piece of land attached to his house, that an Act was passed in 31 Queen Elizabeth, enacting that no cottage should be erected without having four acres of land attached to it. This enactment fell in disuse, but we must have observed I think, in many instances, what a large garden some of the old cottages have attached to them, and for this reason how the poor cling to them even where they have ceased to be fit for habitation. About a quarter of an acre is the quantity which a labourer can be expected to cultivate without neglecting his master's work, and this, well cultivated, will supply his family, if, as is now frequently done, a small piece be allowed him on the farm for potato ground. Very good results have been obtained in many cases by giving as much as half an acre of ground, and planting some fruit trees therein. In a good season the crop very often suffices to pay the rent. Where, as in the case of villages, it is impossible to obtain a garden attached to the house, the difficulty can be met by providing allotment gardens, though this is in many respects far less satisfactory than the cottage garden. The plot of ground close to the house is a source of pride and enjoyment to the whole family, and involves no extra walking after a hard day's work. The walk to the allotment ground very often involves the stopping at the public-house on the way back. The practice now so common of having cottage garden exhibitions annually, and awarding prizes for the best fruit and vegetables, is attended with the best results, and one of the most useful features is the prize given for the best cultivated garden. Another custom, which is almost confined to Derbyshire, Shropshire, and Cheshire, of the cow run or grass allotment, is the greatest boon to the labourer. I have had some experience of it in the latter county, and in one village I am acquainted with it is universal. In these districts it is quite common for an ordinary day labourer to rent as much grass as will keep one cow, the plots extending in size from five to ten acres, and these are not in any sense small farmers, but mere daily labourers. The cow is looked after by the wife, and the annual value is set at about £12. The importance to the children of a supply of fresh milk cannot be over estimated. These counties of course stand in a peculiar position from the abundance of pasture land, but I cannot help thinking that on grass farms the same system might be tried, the cottagers paying for the keep of the cow and receiving the milk. I am sorry to find that there is still a great prejudice among many farmers against allowing the cottagers to keep pigs. I am a strong advocate for it myself. The pig represents a species of sinking fund, and when he comes to be killed he is such a help to the family, and the day of his death is a little innocent festival in the household. More than all, he is important in furnishing manure for the use of his garden. I know the arguments that are used against it—the temptation it offers for petty thefts; but surely a labourer, if he is worth anything, can be trusted. Next in importance to the labourer's home is that of his education. This question of education of the agricultural labourer has been, and will long continue to be, a very perplexing question. Owing to many village schools being of necessity mixed schools to a certain extent, that is to say, consisting of tradesmen's children and children of parents in a higher condition, it is maintained by some that the kind of education given is not the best suited to his future condition in life; in fact, we have all heard it asserted gravely that his inferiority to his forefathers is owing to his over-education. That this is a great fallacy, and merely used by the enemies of education to throw discredit upon it, it would be easy to prove; but were we to admit the truth of it, should we as employers of labour be justified in keeping back from the young of our villages that which both here and hereafter tends so directly to their happiness? It augurs ill for the relations between the employer and employed if they are only to be cemented and rendered safe by the bonds of ignorance. There is no doubt that if it were possible to carry it out, something of a technical education, and not only the three R's, would be of great advantage to our labouring poor, and more especially in the case of girls intended for domestic service, that they should be trained to wash, iron, and work well with the needle. This is done in some cases, and with very good results. Our forefathers recognized the importance of this kind of education, and we find in Henry VIII.'s time an enactment which empowered

the parish officers to take up all idle children above the age of five years, and appoint them to masters of husbandry or other craft or labour to be taught. I think that in the course of a few years we may expect to see a great improvement in the education of our labouring poor. I hail the late Act as a great step towards obtaining good national education for all classes. The state has now distinctly recognized its obligation of enabling all classes to obtain a sound elementary education, and the importance of the compulsory clauses cannot, I think, be over-estimated. The country owes a great debt of gratitude to the clergy for their exertions in the cause, and in many parishes had it not been for them education must have languished altogether. But in many cases under the old system education was too much a matter between them and the village-school children—it was too personal a matter—the farmer and other residents in the parish had nothing to do with it, and probably never went inside the school. The only way, I conceive, to have a good system of education is to interest all classes in it, and the only way to do this is to make them contribute towards the expenses of it and have a share in the management of it, and this, under the system of school boards, will be accomplished. One of the principal difficulties which lies in the way of giving our agricultural poor an efficient education is the early age at which they are taken from school. Various remedies have been suggested for this, such as half time—that is to say, working half a day and attending school the other half, or attending schools so many weeks in the year and working the others; but both these are difficult of accomplishment. The only efficient mode is for the employer of labour to discourage very early labour in the field. The temptation to the poor man with a large family is of course very great to get some of them out as soon as possible, and for this reason very often out of kindness—often mistaken kindness—the farmer takes them on to mind birds or sheep, or something of the kind just when they ought to be at school. It is, of course, difficult to fix the exact age at which a boy should be put to farm-work, but in no case should it be under 10, nor should he work more than 10 hours a day between 10 and 14, and it would be very desirable if it could be delayed as late as 12, exception of course being made at haymaking or harvest, when there was a special demand for hands. Upon this point of age all the agricultural commissioners were agreed that the reasonable limit to fix was 10 years. We state that juvenile labour is very valuable to the farmer, but that under 10 years of age it is not indispensable—that the earnings of the children are very useful to the parents, but that children under 10 hardly do more than pay for the extra food and clothes which they require when at work; that education is very valuable to the children; that between five and ten they may have acquired an adequate knowledge of reading, writing, and arithmetic, but if removed earlier it cannot be so. That the state of education in the south is far below the standard of the north must be admitted. In Scotland, where the parents themselves are educated and understand the value of education, the education of the children is carried on at home. With us, I fear, it begins and ends in the school. Lord Grey, who has an intimate acquaintance with the labourers of Northumberland, told me that he never knew a single instance of an agricultural labourer who could not read and write, and the same with some modification may be said generally of the condition of the peasantry in the north. I have little doubt but that the extension of machinery in agricultural operations will tend to set a higher value upon education; that as a matter of self-interest labourers will educate themselves sufficiently to obtain the highest prizes which agricultural labour holds out. Mr. Jacob Wilson, the manager of the Northumberland Steam Cultivation Company (quoted by Mr. Dent), speaks of the rise in wages under a system of steam cultivation. He says, "I find we are at present employing about 90 men, and of these about 60 were formerly ordinary but intelligent farm labourers, receiving 14s. or 15s. a week. They are now making 20s. to 25s. But you must remember that all our farm labourers down here are well educated." Mr. Stanhope, one of the commissioners, gives figures in support of the same facts, and Mr. Dent in his paper confirms the statement that the use of steam power in agriculture is accompanied by a substantial increase in the wages of the men employed in connexion with it. Having spoken now of the two principal elements in the improvement of our labouring population—the better home

and the better education—I must say a few words on one or two points which I think tend to check the elevation of the class as a whole. Good as was the object of the framers of our Poor Law, and difficult as it would be to point out any better system, I can hardly doubt that its tendency has been to check that feeling of self-dependence and respect which is so essential to the well-being of the agricultural labourer, and in many cases to pauperize a great number of the population. Had the law been differently administered from the first, had a more strict rule been adopted in respect to out-door relief, had the workhouse test been rigidly enforced, it might have been otherwise; but into that I need not stop to inquire. I am afraid that the facts are as I have stated, and that the poor have got to regard parochial relief as in the nature of a sick fund, to which, in sickness or want of work, they may have immediate resort, and that among too many of them there is no sense of shame in being on the parish books or in looking forward to ending their days in the union. Several of the commissioners appear to think that the poor would make more use of clubs if it were not for the influence of the Poor Law. Many industrious and deserving labourers, says Mr. Stanhope, appear to be discouraged from making the effort to secure independence by self-help from the fear of losing their presumed right to relief from the poor-rate, and the guardians have no fixed rule by which to determine such cases. Sometimes they consider the receipt of club allowances a bar to parochial relief, and sometimes they do not. Mr. Norman wonders that the poor ever do practice self-denial for the sake of a maintenance in old age when the Poor Law will give it them without, and feels sure that this has a direct tendency to weaken those feelings of self-reliance and independence among the labouring classes, on the development of which qualities the amelioration of that class must necessarily depend. It is most important, I think, that in administering relief, boards of guardians should recognise the claims of those who subscribe to benefit clubs to a more liberal allowance. In many cases this is now done, some counting what they receive from their club at only half, others at one-third, and this, if universally adopted, would tend greatly to encourage habits of thrift among the poor. It is, I think, very much to the credit of the labouring class that many of them are members of benefit societies. The commissioners as a whole, however, report very unfavourably of these benefit clubs, and I am afraid it must be allowed that in many cases they are little better than public-house clubs, and the custom of breaking them up at stated periods and dividing the funds operates most hardly in the case of the aged subscribers. Something has been done lately to bring these clubs and their rules under the operation of the law, but I think that the rules laid down ought to be more stringent still. One of the best managed of these is the Hampshire Friendly Society, which grafts upon the ordinary business of a benefit society the system of deposits. Of all the injurious influences to which the labourer is subject that of the public-house and of drink is the most noxious. It is at the public-house that the wages are spent, that the bad company is met with, that the misery of home is caused, that loss of character and health is acquired; but as it is the most wide-spread and pernicious, so it is the most difficult to cure, the attractions are so great—the warm fire, the bright lights, the company, the absence of all those discomforts which are to be met with in so many cottage homes. These are inducements too great to be withstood. The cry is for legislation, but how difficult it is to legislate on the subject the events of the past session have taught us. That the multiplication of public-houses does multiply the temptations of the labourer to drink cannot be denied, and it is possible that some good might be done by a gradual reduction in the number of public-houses. I believe also that shops for the sale of beer not to be drunk on the premises might be multiplied with advantage, under several strict regulations as to the way in which the business was conducted. We do not wish to deprive the labourer of his beer, but we wish to remove out of his way the temptations to spend his hard-earned wages at the public-house. Mr. Kettel considers that a system of this kind would tend greatly to diminish drunkenness, and I must say I think there is a great deal to be said for it. Mr. Cully, one of the commissioners, in his report says: "I do not desire that the labourer should be denied every facility of quenching his thirst in beer; on the contrary, I should like to see beer sold across every counter with as little restriction as bread and butter, save only that it

should not be drunk on the premises. Under such a system a man would probably take home to his family only so much beer as he could conveniently pay for, and he would be robbed of the temptations to excess which it is the business of the beer-house keeper to provide. I wish for my own part that the system of giving beer or cider at harvest or haymaking would give place to the far better custom now generally adopted in the midland counties of giving it all in money. A great deal more liquor is consumed in many instances than is required, the work is done none the better in consequence, and the man who would wholly or in part abstain that he might take the extra money home has no chance of doing it. The same money spent on food would go much farther and be much more beneficial. I am willing to believe that there is not more, perhaps not so much, drunkenness among the working classes as there was formerly, and, speaking of our own part of the country, I think I can state it to be a fact. But still in the absence of actual drunkenness, what a vast amount of money finds its way into the hands of the publican! It is reckoned that half of the money spent by the labouring poor on drink is improperly spent. We are on the eve of some alteration in the law in respect of public-houses, and in any measure that is introduced I hope the right of the inhabitants to determine the number of houses that may be required for a district will be duly recognized. There are one or two other points affecting the condition of the agricultural labourer on which I might touch, such as the public hiring at the statute fair or the gang system, but these bid fair to become things of the past, and are generally condemned by the more healthy public opinion which prevails at the present day. As neither system fortunately obtains in the South of England, they have no special need to be commented upon. The question of female labour is one upon which the opinions of the Agricultural Commissioners, as of most other persons, are widely at variance. It may, safely, I think, be asserted that while it cannot be altogether superseded, nor is it desirable that it should (such employments as haymaking and bop-tieing and other light work being well suited to women) their work should be reduced within the smallest possible limits, and be confined to the better season of the year. The woman's place is with the home and looking after the house and children, both of which suffer by her constant absence at field work. Although in the north it still exists to a great extent, throughout the country generally female labour is very much on the decline. It remains for me now briefly to sum up the remarks that I have made. I have taken a rapid glance at the past history of the agricultural labourer, and from this I think we have seen that his present condition is in many respects not so favourable as it was two or three centuries ago. On the other hand, it is a hopeful sign that of late years it has improved, and is still improving. I am sanguine enough to hope that under an improved system of farming and a more general introduction of machinery, there will be an opportunity for the better class of labourer to earn a higher rate of wages, and to this we look as one of the principal means of bettering his condition. These changes may be of slow and gradual growth; they will be wrought independently of us, by the force of circumstances. The obligation meanwhile is perpetual upon us, the employers of labour, to cultivate friendly relations with the labourer, and to do all that lies in our power to better his moral and material condition. Mr. Nicholls puts this well in his paper on Agricultural Labour (in R. A. S. Journal, 1866). "It is surely our duty," says he, "to impart all the improvement of which the labourer's condition is susceptible, to strive to increase his comforts, and to endeavour by every means in our power to make him happy and contented in his position. No one will deny that the labourer is as necessary to the employer as the employer is necessary to the labourer; each is, in fact, essential to the other, and the kindest feelings should be mutually cultivated between them." What says Lord Shaftesbury to the same effect? They are noble words, worthy of their noble author, and with them I may fitly conclude: "We owe to the poor of the land a weighty debt. We call them improvident and immoral, and many of them are so; but that improvidence and immorality are the results in a great measure of our neglect, and in not a little of our example. We owe them, too, the debt of kinder language and more frequent intercourse. This is no fanciful obligation; our people are more alive than any other to the honest zeal for their cause and sympathy with

their necessities, which, fall though it often may, on unimpressible hearts, never fails to find some that it comforts, and many that it softens. These men appeal to us with every claim of justice, service, and affection. They and their fathers have tilled our fields; they have replenished and still replenish our armies; and often have I heard the great Duke of Wellington declare that all his ability and courage would have effected nothing had he not been called to command so noble a material as the British labourer. Such service they have rendered once, they may be summoned to do so again, and surely then we shall find our account in a vigorous and loyal peasantry."

Mr. JOS. DAVISON said he believed Mr. Gower's suggestion as to the cultivation of better feelings between employer and employed was one of the best means of remedying the present unsatisfactory state of things. As to the improvement of labourers' cottages, that was a question for the landlord entirely, and he believed the tenants would be found willing to pay a fair interest for any money laid out in that way.

Mr. WALKER said the labourers in this part seemed quite different from those in Yorkshire, where they took a pride in their cottages, and on Sundays dressed up and went to church. He did not think there was in the south sufficient grass land to allow the men to keep a cow; but he always let his men have a certain amount of new milk every day. He also gave them a piece of land for potatoes, and sold pork at considerably less than market price; and altogether he and his labourers got on very well together. At the same time, the men in this part were not so well educated and brought up as in Yorkshire.

Mr. CRESSINGHAM believed it would be a great advantage if on large estates some central and suitable home for the young men could be provided to keep them away from the public-house.

Mr. TAYLOR (Wickham Court) said: The agricultural labourer desired and meant to improve his condition, and it was the inclination of landowners and tenant-farmers to help him to do so. They wished to see him happy and comfortable, because otherwise they could not be happy and comfortable themselves. The two great things requiring attention were domestic comfort and education. In the absence of a comfortable home a man was apt to lose his self-respect, and, consequently, his respect for others. Education without home comfort would lose half its influence and value. He was not in favour of giving agricultural children a fancy education, but would give them sufficient education to enable them further to educate themselves, and raise themselves in the social scale. As to cottage building he believed, with Mr. Davison, farmers were willing to pay a further per centage for any such outlay, and serious responsibility was upon the landed proprietors in regard to that matter. It was quite true, what had been written by Mr. Culling, that the landed proprietors of the present day are expected to perform not only their own duties, but the duties which their predecessors had neglected. Some of them were in a position to go into the matter thoroughly, and others were not, but at all events it must be admitted that both in England and Scotland a large proportion of the proprietors were now doing their duty to the best of their ability, to better the existing state of things. He joined in the thanks to Mr. Gower for his kindness in giving them such an excellent paper, and they gave him credit for the higher motive of desiring to promote as much as possible the welfare of a class of men very much dependent upon him.

Mr. STREETER asked Mr. Davison if he thought there were many agricultural labourers in a position to pay £12 or £20 for a cow; and if they got the master to advance the money, what security had the master got, supposing the man drove the cow to market and disposed of it? Then again, as the labourer could not keep his cow separately, it would have to be kept with the master's, and if so how would the labourer know when to leave off milking his master's cow, and when to begin his own? The temptation would be to milk another man's cow longer than one's own. Then as to keeping pigs, it might be a temptation to the labourer to go to the barn for a little corn; and it would be a better plan to sell the labourer pork at a reduced price, as was done by Mr. Walker.

Mr. DAVISON, in reply to the first question, said the cow would not be the property of the labourer till he had fully paid for it; so much per week would be deducted from his wages till the value was paid before the property in the cow would be transferred. As to the temptation to rob the master he could only say that on his family's farm in Noathumber-

land, where the men had kept cows and pigs for the last 150 years, not a single case of peculation had ever come to light, and he believed if the men were treated in the same way here they would be as honest. Moreover in the north a part of their wages consisted of corn, and hence they had no temptation to steal it.

Mr. STACEY thought payment in kind an antiquated notion, and that in future labourers must be treated on the fair commercial principle of paying them what they are worth. They must be paid as much as possible by the piece, and in that way the best workman would get the best pay. He was in favour, where practicable, of the man keeping his pig, because it consumed the garden waste, and supplied manure to produce the next crop; he agreed that there ought to be improvement in the cottages, and that with regard to the single labourer, as farmers could not go back to the old times when he lived in the house, some place should be established where the single labourers could live. On large farms it would be quite possible to have a house for them, kept by a respectable middle-aged woman. He would object to three bed-roomed cottages, because that would hold out a temptation to the occupier to take lodgers.

Mr. BARLING advocated the establishment of savings' banks, on the ground that the men are willing to save, but do not quite know where to put their money. They had answered well in Wiltshire.

Mr. LEVESON-GOWER, in reply, favoured Mr. Stacey's idea of payment by piece-work, as then the race was to the swift and the battle to the strong. It was very depressing to a

superior man to find himself paid only the same as the inferior. Still, there was so much work on the farm that could not be done by piece that that mode of payment could not be systematically introduced. In regard to Mr. Cressingham's suggestion of a lodgiog-house for the single men, that might be tried, as he knew it had been in one case, on large farms, and on the smaller farms the third room of the three bed-roomed cottages, condemned by Mr. Stacey, might often be available for lodging the single men. He agreed with Mr. Stacey that payment in kind was becoming obsolete; and although it was no doubt successfully carried out in the north, it was not a system that they would introduce where it did not already exist. At the same time, he thought modifications of it might be usefully introduced here, such as allowing the man to keep a cow or pig, or allowing him so much milk; it was an encouragement to him, and gave him more interest in his domestic affairs. The administration of the poor-law had a great bearing on the labourer's condition, and he thought boards of guardians should be very zealous to the giving of out-relief, and should be more ready to encourage those who, by paying into a friendly society, had shown a disposition to help themselves. He also approved Mr. Barling's suggestion as to savings' banks, and knew of cases where the employer had sometimes taken care of the men's savings for them for the year. The labourers would generally be found willing to save; they only wanted to know how and where to deposit it.

Mr. W. J. WILSON moved, and Mr. STABLES seconded, a vote of thanks to Mr. Gower, which was carried, and acknowledged.

BEDFORDSHIRE AGRICULTURAL SOCIETY.

DISCUSSION MEETING.

At a meeting of this Society held at the Swan Hotel, Bedford, under the presidency of Mr. James Howard, M.P. There was a large attendance, numbering over sixty, and the meeting was considered of unusual importance in the history of the Society, as being the first convened for the discussion of practical subjects connected with farming.

The CHAIRMAN, in opening the proceedings, said he was happy in the first place to congratulate the Society upon entering upon a new phase of its history, and also on the large and respectable attendance he saw before him on this occasion. By its annual shows the Society had contributed in no small degree to raise the condition of agriculture and of the agricultural labourer throughout the county, but hitherto it had afforded its members no opportunity of interchanging opinions on topics relating to the science or practice of agriculture. This was pre-eminently an age of discussion. Every subject of public interest was brought to the bar of public opinion, but the farmers of England were not at all behind other bodies, for they had their Chambers of Agriculture and their old-established London Farmers' Club, than which no organization perhaps had contributed more to the advancement and improvement of agriculture in this country. It was not every farmer, however, who could afford the time or cost of going to London to attend these discussions, and therefore the committee of the Bedfordshire Agricultural Society had determined to hold periodical discussions of this character. He would now call upon his brother to read the paper which he had prepared.

Mr. CHARLES HOWARD said that farming, farm labourers, land-laws, and land questions generally, had received of late more than ordinary attention. Statesmen and eminent landlords had written and spoken upon them; Social Congresses had thought them worthy of debate; while political economists had on various occasions favoured us with their theories. With some of the latter the remedy for many of England's evils was the subdivision of our large domains, and parcelling out the country into small farms; but if these gentlemen would point him out a large territorial estate where large and moderate-sized farms prevailed, then he would show them where the most corn and meat was produced, a fact which the consuming classes of

this country ought not to lose sight of. The farmers had no wish to see the Lords abolished, nor their ancestral estates cut up: on the contrary, they thought it would be better for the agriculture of the country if the land had fewer owners. Their irrepresible and lively friend, Mr. Mechi, had of late inundated the press with his letters. Those who knew Mr. Mechi appreciated him very much for the kindness of his disposition and his desire to benefit agriculture, but the fact could not be disguised that in most of his letters there was an evident leaning to the landlord at the expense of the tenant. Take the question of the over-preservation of game, which had been the ruin of hundreds of farmers. When tenants complained of the injury done them, Mr. Mechi bade them farm the best and highest where the most damage was done, viz., about the coverts, or to run wire fences all round the fields, a course which some would pronounce as "adding insult to injury." A very good farmer, not far from Bedford, had tried this plan, but very soon had a notice to take up his wire fence or a notice of another form would be the result. Mr. Mechi had access to *The Times*, and with such an advantage, instead of schooling the tenants he might do vast service to agriculture and to the country by drawing attention to the fact that the land can never be made to produce its proper amount of corn and meat until landlords either grant leases, or (still better) agreements, subject to two years' notice, with compensation clauses for unexhausted improvements. Men of capital and skill would not take land under sharp landlords, subject to a six months' notice to quit. This was a question which concerned the consuming classes more than they at present realised, and the high price of meat was partly the penalty of such a state of things. Agriculturists intended that their agriculture and their various breeds of animals should continue to be the boast and admiration of the world, and he trusted that the reading of papers on such occasions as these, followed by practical discussions, would lead to so desirable a result. This movement, he remarked, had been frequently suggested by their late lamented friend Mr. James, of Cople, but it was reserved for the year of presidency of the Chairman, who had brought the subject prominently before the Society, for the movement to be inaugurated, and he (Mr. C. Howard) appeared before them, at the request of the Com-

mittee, to open the first discussion. In a carefully prepared article in the *Mark Lane Express* of Nov. 20, it was estimated that the annual value of the corn crops alone in Great Britain was over £80,000,000, and that the annual value of all agricultural produce in Great Britain and Ireland is over £300,000,000, facts which those who were in the habit of depreciating agriculture would do well to study. Of late years the harvest had become a most anxious and trying season, the farmer needing much grace and patience. Our labour supply is no longer what it was. Those itinerant bands of Irish reapers who came yearly to cut down our harvest, either remained at home, or had left their country—in some instances, doubtless, “for their country’s good.” Nor did other portions of our population turn out as formerly for the harvest month. The continued extension of railways, the opening of ironstone quarries, and the great prosperity of the building and other trades, had drawn largely upon our agricultural population, and would continue to do so until farmers competed with them in the price paid for labour. Hitherto the farmer had proved equal to the emergency of his position, though at some considerable cost. His wants and requirements had brought into existence during the last 25 or 30 years gigantic manufactories of agricultural implements, and those who remembered the early meetings of the Royal Agricultural Society could bear witness to the enormous increase in this branch of its proceedings. Although farmers rarely made fortunes, many had been made out of them; but they honoured the men who had so prospered, and during the last harvest many a thanksgiving went up for the reaping machines, without which much corn must have been in the fields at this moment. The farmer was therefore fully alive to the fact that he must fly to machinery to meet the scarcity of labour. The labourer had gradually withdrawn his opposition to machinery, as he found the hard work done for him, and thanks to public opinion the opposition to it on the part of the landlord had nearly died out. He (Mr. C. Howard) had only heard of one case last harvest where a tenant was forbidden the use of a reaping machine. This good man came and told him (Mr. Howard) his troubles. He had 50 acres of wheat which required cutting, and scarcely any men to do it. I asked him whether his landlord expected his rent (laughter). He replied: “Oh yes, and no mistake.” I then said: “Are you an Englishman?” “Oh yes,” he replied. “Well, go home and act like one; use your machine at all hazards.” His reply was—and I would have those who have any doubt about the propriety of an equitable Tenant-Right mark it—“I should have no hesitation, but I have laid out a good deal of money and if I offend I can be got rid of by a six months’ notice to quit.” To men of this class, and others opposed to the introduction of machinery, I will use the expressive language of the great Mr. Cobden. Of course it did not suit us at the time as it was applied to the agricultural interest in their opposition to free trade. “To check it,” said he, “you are as powerless as a cork upon the cataracts of Niagara.” In tracing the history of the reaping-machine from the earliest period to the present time, to make the farmers happy they required a companion machine to tie the corn up. The reaping-machine most in favour was the two-horse side sheaf delivery, but on most farms in this neighbourhood reaping machines were used of one make or another, and various were the methods in which the harvest was conducted. Nine farmers out of ten let the work in one form or another, but a few preferred the old system of engaging the men by the month, others preferring to let the whole of the harvest. By far the greater number, however, merely let the cutting and tying, charging a price per acre for the machine, the remainder, with the exception of thatching, being done by the day. He thought it preferable to put the machine in the hands of one of the best men, who should be rewarded for extra exertion and care of machine; the tying, shocking, and dragging to be let either to their own men or to strangers. He thought it desirable that a field or large portion of a field should be cut before the men were put in it; by this means the men could be placed in as many companies as the master might prefer. By placing a large number of men together the good man would be reduced to the level of the indifferent one. Great vigilance, however, was necessary on the part of the master. Valuable as the horse-drag was, he had seen great mischief done by its too free use, especially on clay soils, too much dirt being collected by it. He thought the hand-drag should be used only over

the whole of the land at the time of shocking, its gatherings tied up in bundles and stacked separately, the horse-drag giving the finishing stroke after all was carted. As to the stack, he thought that there should be sufficient in it for a full day’s work with the thrashing-machine. He inclined to the oblong shape with the hipped roof, or the old hovel without its stand or frame, the size he preferred being ten yards long by five and a-half yards wide. Much damage was often sustained by the roofs of stacks not being properly built, many stackers not taking sufficient care to keep the middle full so that the outside sheaves should shoot off the rain rather than conduct it into the stack. It was a great boon to the farmer to have in his service some good stackers and thatchers, and these men deserved every encouragement. He regretted that the funds of the Society did not allow them to continue prizes for these operations. He also thought it desirable to place the stacks in several convenient spots on the farm rather than all together. In case of fire it was not right to the insurance office, nor was it good policy to risk the destruction of the whole of the hay and straw of a farm. A labour-saving machine was being gradually being introduced in the stacking of hay and corn—he alluded to the elevator. During the last harvest he had applied a one-horse gear to his ordinary straw-jack, and had used it with considerable advantage in the stacking of barley, saving at least two men on a stack. He believed they were made also for carrying up corn in a sheaf, and he did not doubt they would come into more general use. Now, as to thatching. In the course of his 25 to 30 years’ experience he did not remember so much damage being done to stacks as by the 4-inch rain-fall during the latter end of last September. On his Bromham farm, on which the harvest was a week later than at Biddenham, he was a considerable sufferer, and he was sorry to say he had many “partners in distress.” He longed for some quick temporary mode of covering. He envied his friend, Mr. Joseph Robinson, of Clifton, and the proprietor of Luton Hoo their extensive corn-sheds. Mr. Robinson has a double shed 60 feet long by 40 feet wide, and 17 feet high to the plate, capable of holding from 200 to 300 quarters of corn, which cost £180; he has another the same length but half the width, and so satisfied is he with them that he intends building another or two next summer. Mr. Robinson said, in his letter to him: “I would not be without them for double their cost. They are better than any barn, and make the farmer very independent of the weather both in harvesting and thrashing.” The corn-shed at Luton Hoo is of immense size, and this, together with the farm homestead, is one of the sights of Bedfordshire. There were some rich landlords who doubtless would erect a few such buildings by receiving interest for their money, and it was pretty clear it would answer a tenant’s purpose to pay it. The cost of thatching was very considerable each year; but he would not dwell further upon this subject, preferring rather to devote his attention to the beer question, which had been so long a source of trouble and annoyance to the farmer. From all he could learn, the farmers of Bedfordshire were more hampered by this custom than those in most other counties. Money payments, all the year round, had been substituted by one or two gentlemen, but he had personally long wished to see his way out of the difficulty, and he confessed he had not yet done so. So long as the present drinking customs remained, his only fear was, if the masters did not provide a good wholesome beverage, that the man would introduce on the farm and at all hours the frightful stuff of the nearest beer-shop, the result being that the work would be neglected, and that the man would be rendered half mad. Money payments might, however, be introduced among the boys, and he would advocate liberal payments too. He had often felt condemned in giving little boys so much beer. He thought that if they could see their way to a new great coat at the end of the harvest they would be well pleased to forego their beer. He had no doubt that by the time the boys who were to receive the benefit of an improved education became men, the substitution of money payments for beer would be the rule. This led him, in conclusion, to refer to the condition of the agricultural labourer. One farmer-member, and long may he remain so—Mr. C. S. Read—in his address to the Farmers’ Club only the other day, and Mr. Dent, M.P. for Scarborough, in an article in the last volume of the Royal Agricultural Society’s *Journal*, have both done good service in placing before

the public the true position of our labourers. Both articles are worthy of every farmer's perusal. No man, in my opinion, is more rapidly improving his condition than the agricultural labourer. The heavy work of the farm is now done by machinery. The flail is preserved as a relic of a barbarous age; the scythe and sickle are gradually disappearing; yet the agricultural labourer is at this moment receiving more for his work than at any former period of his history. I do not for a moment think it will compare with that of the higher class of artisans. But if the following advantages are taken into consideration—his piece-work, his extra wages in hay-time and in harvest, his allowance of beer at a weekly cost of 1s. 6d. the year through, his cheap cottage and exemption from all rates, his garden and allotment of land of a rood to half an acre, together with the gleanings of his wife and family, the weekly income of a steady agricultural labourer will compare favourably with that of the lower class of artisan. Perhaps you will think it a bold assertion, but I verily believe that according to numbers employed, I can find a greater proportion of men on my farm than my brothers (Messrs. J. and F. Howard) can at their works, who will change you a sovereign on any day in the middle of the week. As to the nine-hours movement, of which we have heard so much lately, our labourers have availed themselves of that boon without any strikes for many long years past. Our men, after reaching the homesteads, have perhaps to go to a distant field to work, the walk occupying some 15 to 30 minutes; the time allotted for meals and leaving off, except when at the homestead,

cannot be so rigidly enforced as in a manufactory; on thrashing days, and other busy occasions, there is the time devoted to "eleven o'clock" and "four o'clock." These deductions, coupled in the short days of winter, justify me in the statement that the farm labourer does not the year through work more than nine hours a day. Still, on some farms they carry the hours of harvest labour to an extreme. As to the apprehension lest the agricultural labourers should be over-educated, his own experience was to the contrary, as he had found that those men who had had the most educational advantages were the best labourers, and the most reasonable to deal with. Let the agricultural labourer be better educated, and the better dwelling must follow, for he would refuse to live in such hovels as his forefathers had been content to dwell in. He (Mr. Howard) hailed with much satisfaction the prospect of an improved education for the rising generation of labourers, and he hoped the farmers would do all they could to forward it by refusing to employ any boy under ten years of age. In a few years, then, at most, we should hope to see a great improvement in our agricultural labourer. He would be raised beyond the attractions of the beer-shops, now his greatest enemy; our model prisons would have fewer inmates; and paupers, instead of as now being the rule, would be the exception.

A long discussion followed, on the conclusion of which votes of thanks were accorded to Mr. Charles Howard, and to the President, Mr. James Howard, M.P.

LORD LEICESTER'S LEASE.

"I have found that in the lease in use on my estate there were many restrictions, such restrictions as I should not like to be bound by were I tenant of a farm. I have, therefore, with the assistance of my agent and my tenants, deviated from the beaten track, and endeavoured to frame a lease more in accordance with the spirit of the age, avoiding all interference with the capital of the tenant, removing all clauses that dictate as to the cropping of the soil, or as to the sale of the produce, and, as far as I can, giving him security for the capital invested. I have endeavoured to place my tenants in that position which I should like to hold as an occupier of land, and in doing so I am satisfied I have studied my own interest as well. That lease will be printed, and with as few legal phrases as is practicable; and I shall be happy to submit a copy of that lease to any of my friends who may like to see it, because I believe, with certain modifications, it may be adapted to many estates of this country, both for the advantage of the landlord and the tenant." So said Lord Leicester, at a dinner at Docking during the autumn, and we are now enabled to give the promised lease in full, as revised and agreed to by the landlord and a committee of his tenants. It may be as well to state in the outset that the committee consisted of Messrs. R. Leeds, H. Overman, W. Blyth, L. Taylor, and Betts; while, previous to its final adjustment, the lease was submitted to two general meetings of the Holkham tenantry. This document consequently comes before the country under unusually favourable auspices, as it is but fair to assume that the occupiers are equally answerable with the owner and his agent for the construction of the several clauses. Lord Leicester himself has objected to "many restrictions," nevertheless that which at the first blush of it will probably strike the reader, is the length to which the agreement runs, and the comparatively petty detail upon which it enters. The professed principle, however, of avoiding interference and retraining from dictation has in the main features been well observed. The tenant is to start with a twenty years' lease, during the first six-

teen years of which he is to cultivate and manage the farm according to his own judgment, and to have full power during such time to dispose of all or any portion of the produce of the farm by sale or otherwise. The Farmers' Club has just put upon its card as a subject for discussion during the year—"Freedom in Cultivation and Security of Capital;" and here we have certainly the most liberal interpretation of freedom of action that ever was offered. Of course the landlord protects himself towards the close of the tenancy by ensuring that the farm be left in such a condition as accords with the custom of the country; while he also reserves the far greater power of stepping in during the run of the lease, and insisting that the plough-lands shall be forthwith brought back to the four-course system. The natural effect of this will be that a man may farm as he pleases so long as he farms well; while he will be stopped so soon as he is found to be going wrong or too far. Of course there must be a great discretionary power here, and much will depend on the broad or narrow views taken by the landlord and his advisers. But there can be no mistake as to the wording of one portion of this clause—the tenant may dispose of all the produce "by sale or otherwise," or in any way he likes. Virtually we are inclined to regard this as the most important concession in the agreement, and as the "most in accordance with the spirit of the age." It is, indeed, wholesome to compare this open-handed arrangement with the fiddling, antiquated enactments in many so-called model and prize agreements, wherein you are bound not to sell hay, nor straw, nor roots, or if you take off a load of one or the other you must bring a load of good manure back in the place thereof—and so on. "What we want," said Mr. May, at a dinner at Stafford the other day, "is liberty of action in cropping and selling, so that a man does not deteriorate the land;" and these are the wants which Lord Leicester volunteers to supply.

The terms of in-coming and out-going are not marked by the same grand simplicity of style. Any system of compensation for unexhausted improvements seems, so

far as is possible, to be avoided, the tenant being left to right himself and get his own again during the last four years, should he not renew. There is something of a prolixity here, and more particularly in the citation of repairs, and how these are to be provided for, which considerably weakens the effect of the thing. A man who can be left to farm as he pleases, and sell what he pleases, might be surely entrusted to deal with habitable repair, and to clean "all his gutters, pipes, and troughs," and to "cherish, nail up, prune, and preserve" his fruit trees without the need of any instructions so to do in a twenty years' lease! If these clauses be petty and trifling, there are some still more decidedly objectionable, and it is difficult to understand how it is "in accordance with the spirit of the age" to bind a tenant down "to deliver one good fat turkey at Holkham House in the month of December in every year"—"to deliver so many waggon loads of good wheat straw at the Holkham stables," and "to do so many days' work of four horses," and so on. There is a smack of serfdom in the performance of such duties strangely at variance with the leading elements of the lease, if, in fact one part be not a direct contradiction to the other. How can a man who is at liberty in the first instance to dispose of *all* his produce by sale or otherwise be called upon to supply his landlord with so much good wheat straw? The tenant pays so much for the hire of the land, let the landlord in turn pay so much for the hire of the horses, let him buy the straw, and let there be no longer any such fine or heriot-holding as "one good fat turkey." This is all out of place in a lease drawn in accordance with a spirit of the times; as nothing has a worse tendency than payment in kind, whether this be in loaves of bread, measures of meal, trusses of straw, the hauling of coals, or crumming of turkeys. Again, there are few landlords in England, as we are inclined to think, who behave more liberally by their tenants in the matter of game than Lord Leicester, at least three-fourths of the shooting over the estates being let to the farmers at a low rent. And yet this kindly feeling is not so apparent in the lease. The tenant is certainly "to destroy all rabbits, moles, and rats," while the landlord reserves the exclusive right for himself, friends, and servants of hunting, shooting, fishing, fowling, and coursing. It is not so clear how the right of *hunting* can be reserved, and we have heard of Norfolk farmers who themselves have been at the head of stag-hound and harrier packs. Still, the tenants may kill hares with greyhounds, *but not otherwise*, between the first day of November and the first day of March, though this is no great boon, as not so remarkably in accordance with the spirit of the age, when many landlords are getting to give over the hares and rabbits to their tenants to dispose of, just as Lord Leicester does the other produce of the farm, in any way they choose.

The intention from the time it was first broached always struck us as a very admirable one, emanating as it did from just such a quarter as it should. Lord Leicester, moreover, has been able to preserve the main idea with which he started, although this is fettered and clogged with conditions, or perhaps more properly "set" in the mere verbiage of a solicitor's office. In truth we feel inclined to tell the committee the old story of the Sibly and her volumes, who when she had burned more than half of them asked as much money for the remainder, and only then was it that she found a customer. We should attach something of the same marketable value to this Holkham Lease.

[The following Lease has just been arranged by Lord Leicester and a Committee of the Holkham tenants.]

I. The tenancy is to be for twenty years, commencing on the eleventh day of October, one thousand eight hundred and

but to be terminable at the end of sixteen years at the request of the tenant, with the consent of the landlord; with the intention that the landlord shall then, if he think fit, grant a new lease from the end of the sixteenth year, at the old rent for the first four years of the new term, and for the remainder of the term at the rent that may then be agreed upon.

II.—The tenant is to reside in the farmhouse, and not to assign, underlet, or part with the farmhouse, or any part of the farm, without the previous consent in writing of the landlord or his agent.

III.—The rent is to be £ per annum, and is to become due and be payable by two equal half-yearly payments, namely, on the 6th April and 11th October in each year (except the last half-year's rent, which shall become due and be payable on the 2nd August next before the termination of the tenancy), clear of all present and future rates, taxes, and deductions whatever, except the tithe-rent charge, land tax, quit-rents, and landlord's property tax. The tenant is also to pay 45 per centum per annum on any sum or sums of money expended by the landlord in altering or erecting buildings at the request of tenant, after the works agreed to be done at the commencement of the tenancy are completed; he is also to pay 45 per centum per annum on any sum or sums of money expended by the landlord in draining. The payment for buildings is to commence from the 11th day of October next after the completion of the work, and the payment for draining from the 11th day of October next before the completion; and both the said annual sums shall become due, and continue payable as rent, during the remainder of the term, on the same days as the original rent is payable, and be subject to the same conditions.

IV. The tenant before entering upon the occupation of the farm is to pay to the landlord such a sum of money as the hay, turnips, mangold wurzel, and muck left upon the farm, and grown and made thereon during the then present year, shall be adjudged to be worth for consumption on the farm; the amount to be determined by arbitration, as hereinafter provided; and also the amounts that has been expended for grass seeds sown on the farm in the same year, and twopenne per acre for sowing the same. At the end of the tenancy the tenant is to leave in the hands of the landlord all the hay, turnips, and mangold wurzel, which shall be grown and produced on the farm in the last year, being paid for the same by arbitration.

V. The tenant is to find and provide, at proper and convenient times, before the 1st day of June next after entering upon the occupation of the farm (up to which time the barns or dressing houses are to remain in the occupation of the outgoing tenant), sufficient horses and waggons, or carts, with drivers, to convey the necessary fuel and water to the steam engine for thrashing the corn, grain, and pulse of the previous harvest; to remove the corn, grain, or pulse when thrashed into the dressing-house; to provide labourers to remove the straw as it passes from the thrashing machine; and to provide horses and drivers to remove the steam engine and thrashing apparatus after each thrashing, to any distance not exceeding seven miles from the farm. The tenant is to carry out and deliver, at proper and convenient times, before the said 1st day of June, in loads of not less than 25 coombs each, and not exceeding loads in any week, all such corn, grain, and pulse, to any place as may be required, within ten miles from the farm, and bring back the empty sacks; and he is to be allowed to take the straw, chaff and colder for his own use, and to be paid or allowed by the outgoing tenant the tolls and portage consequent upon carrying out the corn. At the end of the tenancy, the landlord is to make the same provision for thrashing and carrying out before the 1st day of June following, the corn, grain, and pulse grown on the farm in the last year of the tenancy, and to permit the tenant to retain possession of the barns or dressing-houses until that date.

VI.—The tenant is to cultivate and manage the farm during the first sixteen years of the term according to his own judgment, and to have full power during such time to dispose of all or any portion of the produce of the farm by sale or otherwise. During the last four years the tenant shall bring the arable lands into the four-course system of husbandry practised in Norfolk, so that in the last year of the term there shall be, as nearly as the sizes of the fields will admit, one-fourth in winter corn or pulse, upon olland or grass of one year's lying; one-fourth in a root crop, of which not more

than one-fourth shall be mangold wurzel, and not more than one-tenth in white turnips; one-fourth part in barley, or other spring corn; and the remaining fourth part in olland, or grass of one year's lying; and he is not to suffer any hemp, mustard, coleseed, nor any clover, trefoil, or other artificial grass, to stand or grow for a crop of seed in the last four years of the term.

VII. The tenant is effectually to destroy all rabbits, moles, and rats, upon every part of the farm. The tenant is to deliver waggon loads of good wheat-straw at the Holkham stables, or at any one of the landlord's brickyards as may be directed, in every year, without any allowance. The tenant is to deliver one good fat turkey at Holkham House in the month of December in every year. The tenant is to do days' work of four horses, with the necessary waggons or carts and drivers as may be required, to any place within the distance of ten miles from the farm in every year without allowance; and in case any portion of such day's work shall not have been done in any one year, the arrears of such year shall be performed in the subsequent year, if required or appointed by the landlord or his agent.

VIII. The tenant is not to remove nor alter any fences, landmarks or boundaries, nor to erect nor alter any buildings, without the consent in writing of the landlord or his agent. The tenant is not to break up, nor convert any of the meadow or old grass land into tillage, without the consent in writing of the landlord or his agent. The tenant is to pay a further annual rent of £20 for every acre, and the same rent in proportion for any greater or less quantity than an acre, which he shall break up and convert into tillage, in addition to any other rent of the farm; and such additional rent is to commence from the 11th day of October next preceding the breaking up of the land, to be payable half-yearly with the other rents of the farm, and to be subject to the same conditions. The tenant is also to pay a penalty of £5 for every timber or other tree which he shall cut down, crop, orlop, without the consent in writing of the landlord or his agent, in addition to the market value of the tree.

IX. The tenant is to give ten days' notice to the landlord of his sowing barley or spring corn in the last year of the tenancy, and the landlord is to have liberty to sow grass seeds on such lands, which the tenant is to harrow in without any allowance: the tenant is not to suffer any live stock, except swine well ringed, to be upon these lands from that time. The tenant is not to sow any swede turnips in the last year of the tenancy before the 16th day of May. The tenant is not to suffer the ollands or grass lands to be fed by any stock, except those of the landlord or his incoming tenant, after any sale of the tenant's stock and farming utensils in the last year of the tenancy, without first offering to sell the same to one of them by agreement or by arbitration. The tenant is to have all the crops upon the farm properly cleaned and weeded during the last two years of the tenancy; and the landlord is to have the power to do this work at the expense of the tenant, if it be not effectually done upon sufficient notice in writing from the landlord or his agent. The tenant is to stack all the crops of corn, grain, and pulse produced on the farm in the last year of the tenancy, in the fields where they are grown; or in an adjoining one if required by the landlord or his agent; and is to thrash out the same in a husbandlike manner before the 1st day of June following, leaving the straw, chaff, and colder without any allowance, so that the landlord or his incoming tenant may be regularly and constantly supplied.

X. The landlord reserves to himself the power at any time during the first sixteen years of the term, by notice in writing, to require that the arable lands shall be brought into the four-course system within four years from the date of such notice. The tenant, on receipt of such notice, or in the event of the death of the tenant, his executors or administrators without notice, shall bring the arable lands into the four-course system; and from such time he or they shall continue so to farm the lands; namely, the one-fourth part in winter-corn, upon olland or grass of one year's lying, shall immediately after such winter-corn be summer tilled, and sown with turnips or mangold wurzel, and then sown with barley or other spring corn, and laid down for one year with a sufficient quantity of good clover or grass seeds.

XI.—After such notice shall have been given, or on the decease of the tenant, or during the last four years of the term, the tenant, or his executors, or administrators, shall consume

on the farm all the hay, straw, chaff, colder, green crops, turnips, and mangold wurzel (except that grown in the last year of the tenancy), and spread the manure made thereon upon the lands where necessary, except in the last year, when one-third part thereof, as near as the same can be estimated, shall be left turned up in heaps for the use of the landlord. After such notice, or on the decease of the tenant, or during the last four years of the term, the tenant, his executors, or administrators, shall not mow more than a third of the meadow, or old grass land, and that only once in any year, and not two years in succession, nor at all in the last year; and he, or they, shall not mow more than two-thirds of the clover, or artificial grass, in the last year, nor any of the lands more than once; and such two-thirds shall be made into hay, and stacked and thatched upon a convenient part of the farm. After such notice, or on the decease of the tenant, or during the last four years, the tenant, his executors, or administrators, shall cut and scour, at proper seasons in every year, such fences and ditches as may require it, or as the landlord or his agent shall direct; shall defend and preserve all young thorn, quick fences and trees, from cattle and sheep; shall not pare nor remove the soil from the backs of the fences, but keep the banks well faced-up and backed-up, and not less than four-and-a-half feet wide at the base or foot thereof; and shall prevent the banks or fences of any wood or plantation, on or adjoining the farm, from being injured. He, or they, shall also cause all grips, water-courses, and drains belonging to the meadow or grass lands, including rivers on or adjoining the farm, to be opened, drawn, cleaned and bottomtyed, once in every year, at the proper season; shall keep the outfalls of all drains clear and free from obstruction; spread and level all ant-hills and mole-hills; mow all thistles, rushes and weeds, before their seeding time; and not suffer any swine, unless well ringed, to be upon any meadow or grass-land.

XII.—The tenant is to maintain, keep, and leave all the glass, windows, lines, weights, and fastenings thereto belonging; all locks, keys, bolts, bells, bell-wires, hinges, shelves, and fixtures of every kind to the farmhouse, offices and premises; water-closets with the cisterns and going gears; also all gates, gate-irons, stiles, posts, pales, rails, pumps, wells, bridges, tunnels, drains, grips, watercourses, river, river-banks, and other fences, upon and belonging to the farm or premises, in good and tenatable repair and condition, being allowed, or assigned on request, thorns grown upon the farm, bricks, pipes, lime and wood, for and towards such repairs. The tenant is to cause the woodwork and painted walls of the interior of the farmhouse and offices, to be painted with two coats of good oil paint, and the papered walls to be repapered, when considered necessary by the landlord or his agent, and to leave the same in a perfectly good and tenatable state, the paper to be of the same description and quality as at the commencement of the tenancy. The tenant is not to lay any corn, grain, wool, or other weighty or prejudicial matter in the farmhouse. The tenant is to make good at his own expense, both as to material and labour, all injuries to the farmhouse, buildings and premises, through the fault or neglect of himself, or his servants, or by the horses or cattle on the farm and premises, damage by fire excepted: and in the event of damage by fire not the wilful act or neglect of the tenant, the landlord shall sufficiently rebuild or restore the premises damaged or destroyed, within twelve calendar months.

XIII.—The tenant is to cause all gutters, pipes, and troughs, belonging to the farmhouse and other buildings, to be effectually cleaned out when necessary. The tenant is to provide and keep on the farm premises a ladder of sufficient length to reach to the roof of the highest building thereon, in a fit state for use, and to cause or permit the same to be used on all necessary occasions. The tenant is to keep and leave the garden, orchard, and shrubberies, well and sufficiently stocked, planted, manured, cleaned and preserved; and to well and sufficiently cherish, nail up, prune, and preserve all the fruit trees, bushes, vines and shrubs, standing or growing in the gardens, orchards, or shrubberies.

XVI.—The landlord is to maintain and keep the farmhouse and other buildings in good and tenatable repair during the term, excepting only such repairs as are before specified to be done by the tenant. The tenant is to fetch and carry all materials to be used in repairing the buildings, or in erecting new ones upon the farm by agreement during the term. The tenant is to fetch and carry all bricks, pipes, and tiles to

be used in draining upon the farm; and also a proportion of the materials to be used in repairing or erecting cottages belonging to the landlord, and situated in any village within one mile from the farm, with other tenants upon the estate; the proportion to be settled by the landlord or his agent.

XV. The landlord and his agent, and other persons authorised by him, are to have full power to enter upon the farm at all reasonable times, for the purpose of taking down and removing timber or other trees; carrying on draining or other works; inspecting, altering, and repairing the buildings; raising and removing marl, clay, brickearth, gravel, sand, or stone (which, with all timber trees, mines, and minerals, are reserved to the landlord); burning bricks, pipes, or tiles, or for any other lawful purpose, reimbursing the tenant for any injury he may sustain. The landlord retains the power to take land for roads, watercourses, building, plantings, or other improvements, or for the purpose of exchange, allowing to the tenant a proportionate reduction from the rent, and paying him for any actual damage he may sustain.

XVI. The landlord reserves the exclusive right, for himself, his friends, companions, and servants, of hunting, shooting, fishing, fowling, and (subject to the liberty of the tenant, between the 1st day of November and the 1st day of March in every year, to course the hares by means of greyhounds, but not otherwise) of coursing and sporting upon the farm and premises. The tenant is to use his utmost endeavours to preserve the fish, game, and eggs and nests of game, and to prevent all other persons from molesting or destroying the same, or for trespassing on any part of the lands for that purpose. The landlord may bring any action, or take any legal proceeding, or give any notices to or against any person so offending or trespassing, in the name and on behalf of the tenant, who shall not release, impeach, hinder, or discharge any such action or proceedings, without the consent in writing of the landlord, who shall indemnify and save the tenant harmless from the costs and charges.

XVII.—If the rents reserved, or any part of them, shall be in arrear or unpaid for twenty-one days after the date on which they are specified to be paid; or if the tenant shall break or infringe any of the conditions of his tenancy; or shall abscond, or cease to reside upon the farm; or be declared bankrupt; or make any assignment of his personal estate, or any composition with his creditors; or if any writ of execution shall be issued against his person or goods, the landlord shall have power to enter upon the farm, land, and premises, and remove the tenant, or any other persons therefrom, and the term shall thereupon cease; the right of distress, ejectment, or other action at law by the landlord not being in any way thereby affected. If at any time the crops

shall be sold under a distress for rent, they shall be sold subject to the straw, chaff, and colder being left on the farm without any allowance, and the hay and roots being consumed thereon. No receipt for any rent or penalty shall discharge any other rent or penalty than that mentioned in such receipt; and no condition before-mentioned shall operate to weaken, prejudice, or postpone the performance, of any other conditions by the tenant, nor the right of the landlord to enforce the same by action, suit, or otherwise.

XVIII.—In the event of the farm being given up to the landlord at any time during the first sixteen years, in consequence of the death of the tenant, or for any other reason with the consent of the landlord, the tenant shall be paid for any claying or marling done in the four years previous to such surrender, with the knowledge and sanction of the landlord or his agent, at the rate of three-fourths of the cost for that done in the previous year, one-half for that done in the third year, and one-fourth for any such work done in the fourth year before such surrender. In the event of the farm being so given up, by agreement made at any time subsequent to the 1st day of February in the year in which it is surrendered, the tenant shall also be paid one-third part of the cost price of linseed cake, consumed by stock (except horses) in well littered yards with troughed-sheds, or in boxes; or by sheep, when consuming turnips or mangold wurzel on the land, during the last year of the tenancy.

XIX.—When any valuation shall be made of the hay, turnips, mangold wurzel, and muck to be left at the end of the tenancy, the person or persons making such valuation shall take into consideration the state, condition, and usage of the farm and premises, and determine whether the tenant has carried out all the terms and conditions before-mentioned, and whether the farm is then in a clean and creditable state; and if not, shall determine what sum of money shall be paid to the landlord as compensation therefor, and shall deduct such sum from the amount which the hay, turnips, mangold wurzel, and muck shall be adjudged to be worth.

XX.—The word "landlord" shall include his heirs and assigns; and the word "tenant" shall include his executors, administrators, and assigns.

XXI.—If any question or dispute shall arise between the landlord and tenant, or their respective heirs, executors, administrators, or assigns, as to these terms and conditions, or any matter or thing connected with them, or with the occupation of the farm, such matter in difference, including any provided to be referred to arbitration, shall be referred to two arbitrators and their umpire, in accordance and conformity with the provisions contained in the Common Law Procedure Act (1854), or any then subsisting statutory modification thereof.

THE HEXHAM FARMERS' CLUB.

At the December meeting, held at the Club Room, Mr. C. G. GREY, president of the Club in the chair, said that at last meeting he made a few remarks respecting the progress made by the committee of the proposed Middle-Class School. He was glad to say that the farmers had exhibited an interest in it, and on the subscriptions lists he saw many names down for sums from £5 to £25 for starting this school. In the north of the county they had not yet opened a list, as they wanted clearly to understand the conditions on which these promises were made before putting down their names. He hoped that by next week subscription lists would be opened in various parts of the county, and then they would see what the middle class would do. If they came out with subscriptions of £5 and £10 all round the county, then they would show such a list that the large landowners would find it impossible to hold back from giving it their support, and they would get all the money required to carry out the scheme. The Endowed Schools Commissioners were favourable to it. The trustees had not yet taken up the matter, but he hoped they would show such a list that the large landowners would not find any difficulty with them. It was now for those who took an interest in it to take every opportunity of keeping the subject alive, and getting names down on the list for donations, for the Endowed Schools Commissioners and some of the large pro-

prietors had said they wanted to see what proof there was that the people of the county wanted a Middle-Class School, and the only way they could show they wanted it was by putting their names on the subscription list.

Mr. T. BELL (Hedley Hill, Gateshead) read the following paper on The Relative Interests of the Landlord, the Tenant, and the People in the Soil:—

The broad subject proposed for discussion is the interest of the people in the soil. The people we propose to divide into three classes. 1st. Landlords. 2nd. Tenants. 3rd. The people who are neither proprietors nor cultivators of the soil. It will be conceded that all live by the produce of the soil; consequently, to the extent of supplying the individual necessities of life, we are all mutually interested in its produce. So long as the soil produces sufficient to provide for these individual wants, every member of the human family has the right to have these wants supplied. If the term "landed interest" does not include the whole population, it must be limited to proprietors who own more than they need for their sustenance. If a man owns no more land than by his constant attention will procure a living for himself and family, he cannot be said to have any more interest in the produce of the soil than the man who labours and thereby procures his daily bread by another process than agri-

culture. If either party failed to labour, the food supply would fail; indeed the contingencies for a supply of the daily wants seem to be pretty evenly balanced; the labourer may fail to be supplied with labour, the peasant proprietor may lose the fruit of his labour through adverse seasons and cattle disease. We are having it often dinned into our ears by a certain class that "the working man is 'divorced' from the soil"—a most pernicious phrase. We have shown his intimate connection with it, through its produce. Starting on this premise, that all are interested in the soil to the extent of having food and raiment, it naturally follows that we are all deeply concerned whether the supplies of these products be scarce or abundant. Scarcity implies low rents to the landlord, empty pockets to the tenant, and dear food for everybody. It may, therefore, be safely assumed that the prosperity of any populous country will depend to a great extent on the products of its own soil. The country that imports these commodities must pay for them out of its own resources, and if able to produce them, must be impoverished unnecessarily to the extent that it imports. It must follow, that until a country has fully developed its agricultural resources, it has never attained to its highest possible position. Taking this, then, as the *summum bonum* of the nation, how can it be best brought about without interfering with vested interests? We may now proceed to consider the interests of the three classes separately. *The landlord's interest.*—To a landlord who lets his land, the main point of interest must be its capital value. The proprietor has been aptly compared to a banker who lends out his capital to a customer at its market value; the land representing the capital, the tenant the customer, and the rent the interest. To this capital value all landlords in legal possession have an undoubted right, morally and legally. So long as the rights of any sort of private property whatever are mutually upheld and respected, so long will the right of the landlord to the capital value of the land be established. I must confess here that I have failed to find any other interest in the soil to which the landlord can lay claim as an unalienable right, save this capital value, judging by precedent. Whatever portion of the soil can be proved to be absolutely required for certain public purposes—notably railways—the nation demands through Parliament that on payment of market value the owner must part with all interest in the portion required. The question not so easily settled is, for what public purposes may the nation demand a compulsory sale? Let us shortly glance at a few of the landlord's particular interests in the soil. 1st. *His patriotic interest.*—The ownership of land naturally gives to the proprietor the feeling of having a considerable interest in the welfare and prosperity of his country. Many of our old and noble families owe the possession of their estates to the prowess of their forefathers, who gained these estates either as a reward for gallant service in defence of king and country, or on condition that they would be ever ready when called upon to march at the head of a force they themselves should provide in the face of any enemy. This, as you all know, was part of the constitution of the old feudal system. It is unnecessary to say that the conditions under which these latter estates were held have vanished, leaving the descendants of these brave old warriors in possession, while they are only called upon to render such service as the State demands from all their fellow-countrymen. There can be no doubt that at this period of our country's history this sort of paternal relationship which existed between the classes under discussion is rapidly disappearing. It seems as if that particular class, who for ages past has been the peculiar care and under the paternal government of the rich and great, had now so far developed its own facilities that it is entertaining serious thoughts of commencing business, and trying to make its way in the world—seeking to make the most of the advantages and education it received while under the paternal care of its tutors and governors. I am not here to justify this state of things, but we will do well to keep the fact before us as we go along. 2nd. *The landlord's political interest in the soil.*—This interest is now feeling the effects of that altered relationship just referred to. The passing of the Ballot Bill by the House of Commons proves that this power is held by a very uncertain tenure, and also goes to show that some of the other conventional interests at present possessed by the landlords in the soil will only exist so long as the classes under discussion mutually agree as to their possession. 3rd. *The landlord's sporting interest.*—This interest cannot now be

classed amongst the undisputed privileges of a landed estate let out to tenantry. No landowner has the moral right to destroy the food of the nation without the consent of the people. It would easily be understood that were every landlord to convert his estate into a game preserve, the nation would have a perfect right to interfere. What landlord, then, can lay claim to the right if all cannot do it? It is clearly the province of the people to define what sporting rights shall exist, and not a question between landlord and tenant. The future existence of the Game-laws depends wholly on how the landlords exercise their present rights. Food can be imported, unfortunately, while animals to supply field sports to our wealthy citizens cannot be imported; consequently, the British farmer must compete with all the world in the production of food, even to the decimation of his own herds by disease so imported; yet he enjoys the entire monopoly of feeding the game of the British public. Yet, if game preserves and battues become general, and ground-game be persisted in, assuredly will the days of game certificates be shortened. 4th. *The landlord's monopoly.*—The immense estates and consequent disproportion in numbers between the landowners and the rest of the population of this country are considered by many people to be prejudicial to the interests of agriculture, and consequent welfare of the nation. There can be no doubt that the present land laws have a direct tendency to limit the number of proprietors. It does not, however, necessarily follow that large estates are under a worse state of cultivation than they would be if sub-divided. It is allowed that lack of capital is one of the great hindrances to the improvement of estates, but if the rent-roll of a large estate is not sufficient to leave a balance for permanent improvements, where is the probability of that balance being augmented when the number of proprietors' establishments are increased and limited to the same exchequer? It certainly places an immense power for either good or evil in the hands of one person; perhaps too much so. An alteration in the law of settlement or entail would do much to remove this power of evil over the country. We may endeavour to gather from this law something of the control the nation can and does exercise in the tenure of land. By mutual consent we have hitherto wisely guaranteed to the proprietors of land that the good things they sow in life their heirs shall reap; but we have not stopped with that, we have said to many of them—and surely very unwisely—your heir may sow nothing but to the wind, if he chooses, yet we guarantee to his heir, not the whirlwind, but the whole of this good thing, your landed estate. And although spendthrift may succeed spendthrift, we guarantee each succeeding heir possession in tact, if they so desire it, together with every improvement effected by the tenants or other parties on said lands. This is surely a premium paid by the nation to improvidence on the part of these landowners, and ruin in many cases of their dependents. It may be perfectly right that the fruit of a man's good works should be carefully transmitted to his children, yet it is surely wrong in society to take on its own shoulders a larger proportion of the fruit of his evil deeds, and let his own heir go nearly scot free. The present law for distraint for rent is one of the effects of this monopoly. What is known as the Law of Hypothec in Scotland, has of late years been the subject of much discussion and inquiry. The Scotch law gives the landlord a much greater claim over the effects of a bankrupt tenant. In certain instances it empowers him to lay claim to the produce of the land after it has left the farm and been bought and paid for by other parties. So long as there was a difficulty in finding capital in the country, this law might be advantageous. But now, when capital is everywhere seeking profitable employment, there can be no excuse for protecting the interests of one class at the expense of another. We need not enter on the laws relative to the transfer of land; they are generally allowed by all classes to be much in need of reducing and simplifying. *The tenant's interest.*—Assuming that the tenant is the customer of the landlord for his capital the land, and the yearly rent the interest paid for such capital, this places us on the purely business relationship which exists between the two parties. Unfortunately this too often explains the whole relationship—it is a matter of money getting. Although the mercantile aspect of the contract should be always definitely kept in view, yet the landlord and tenant ought to have a mutual interest in each other on account of the great interest they each have in the present and future treatment of the soil. It is only where this mutual interest exists that the highest fertility and

greatest productiveness will be found. The tenant-farmer's annual interest in the cultivated soil of Great Britain is much larger than the landlord's annual interest. We may suppose the average rent of arable land to be about 30s. per acre, but look over a highly cultivated farm about midsummer, and consider the interest of the tenant bound up in the soil at that time. It will be found to be from five to ten times greater than the money value of the landlord's annual interest. Indeed the products now raised cannot be said to be the natural produce of the soil. The old system of farming might be compared to a manufacturer with a natural water power capable of enabling him to set up a certain power of machinery, and produce a limited quantity of goods. The modern system might be likened to the same factory having added to its natural water power an additional imported power, multiplying almost indefinitely its capabilities of production. It seems to me that it is this additional power brought to bear upon agriculture by the farmer, that needs the special attention of the nation. Is it desirable that it should be developed and extended? If so, what means would be likely to produce this effect? I would suggest, give the tenant security for his interest in the soil. The interest of the tenant in the soil is at present such that he would not be justified under any but the most favourable and exceptionable circumstance in maintaining the maximum fertility of the soil. Take a farm of 400 acres at a rent of 30s. per acre, fair market value, entered upon by an intelligent, practical farmer. It will be above the average of farms if it is not capable of improvement. What Dr. Chalmers has aptly described "The margin of Cultivation," will not yield a rent if cultivated. It will not produce enough to pay its way. But by putting on additional capital much of the land outside this margin would pay the interest on such capital, yield a rent, leave a profit to the tenant, and a good produce to the nation. Suppose 100 acres of this farm to be lying in poor grass, wet, and valued at 7s. 6d. per acre. Suppose the proprietor judiciously expends £1,000 in draining, fencing, clearing, &c., this at 5 per cent. increases the rent to 17s. 6d. per acre. The production of this additional rent oftentimes requires considerable enterprise and energy on the part of the tenant. Such land left to nature would really be worth little more for the draining for a few years, as a considerable amount of the grasses natural to wet land would die out, and not until the lapse of some years, would the finer grasses fill the vacancies. The calculating tenant would say, "This land would pay for cultivation, but it would take a stiff outlay to do it justice. I am not sure of much return for the first few years, but it has a good subsoil, and I am sure it would pay eventually, but who knows whether either I or mine would reap the benefit of this outlay? I could perfectly trust my landlord and his agent. I am sure they would do me justice, but they are mortal. So a king may arise that knows not Joseph, and I may be turned out after I have put all this land into good condition. I certainly have an agreement for a proportion of the lime being repaid, and so much for cake, bones, &c., for the last year or so, and some other items, but that would be a poor return for all my outlay, labour, and anxiety. Why, I am sure in ten years I could make that land worth 27s. 6d. per acre; it is now dear at 17s. 6d. My cultivation would, therefore, increase its value 10s. per acre, which, on 100 acres, is £50 per annum I somebody will receive as the result of my attention. £50 per annum capitalised is worth to me £1,000. If I had to leave I probably would not get £100." If the tenant acts on commercial principles he would here say, "There is here no security for investment, I must put no more in than I can take out." The consequence is the land may never be worth more than 17s. 6d. per acre. The simple want of security here, is permanent loss to all three classes. Suppose the tenant goes to work trusting to the future; improves his farm; and at the end of ten years he has raised the annual value £100 per annum real value (making due allowance for any change in the value of money), which sum capitalised amounts to £2,000. Owing to some combination of circumstances the tenant must quit. Now arises the all-important question, whose shall be the £2,000? The law would say, "the landlord's of course"! Justice would ask who made it? and equity would reply "the tenant." It

will be said here, a lease under ordinary circumstances gives a farmer security that he will be repaid any judicious investments. But we may fairly ask, does farming pay such a large percentage on capital, that the farmer can afford to give up a large proportion of its produce? Assuredly not? Yet that that is what is yearly going on is apparent to every observant eye. If a tenant during his lease has increased the real value of his farm, at the end of the lease he finds he has improved against himself; he is placed on the horns of a dilemma, for he must either buy over again what his own capital has produced, or part with it to another without payment. According to the present law, the tenant-farmer's interest in the soil is not equal to the miller's interest in the corn that it produces, or the manufacturer's in that of its fleecy flocks. They are sure of obtaining their raw material at market value, and no matter how they invest their capital for producing food and clothing for the people, they can always command the market value for that capital. Not so with the producer of corn and wool. He may invest his capital to increase the production of food and wool, but what he invests in the soil has no market value to him. What he brings out he gets market value for, what he leaves he has no market for, therefore, he is not justified in putting more in than he can take out. The tenantry of Great Britain may be fairly allowed to ask the question—Why do you grant a Tenant-Right to Irish farmers, and leave us out in the cold? This Irish story may help to illustrate the case: An Irish gentleman was residing with a friend, and on a certain day a number of visitors arrived to stay over night: there was a difficulty about accommodation. The good lady of the house said to her resident friend, "We'll have to do our best to make these strangers comfortable, so you, dear old friend, will just take the bed in the garret." "Shure and it's a mighty quare way you have of showing your friendship," said the friend, "Better be a stranger than a friend here." Granted that the Irish tenantry needed a Tenant-Right a little more, it cannot be said they deserved it better. Mr. Gladstone's definition of an unexhausted improvement was happy, and the correct one: "whatever increases the lettable value." No details or scales of lime, bone, cakes, &c., used, will ever do an enterprising, energetic tenant justice. They take no account of how a man used his brains in their application. If farmers participated in the permanent improvement of the soil they create, it would give such an impetus to agriculture in England as would surprise the most sanguine. Capital would flow into the soil from the tenantry, when they knew security was given that they should have their share of what it produced. Landlords would have their estates improved with that capital, and participate in the increased value. The landlord's interest must increase with the tenant's improvements; therefore a definite proportion only of the permanent increase of value must be allotted to the tenant. The labour market would be greatly benefited. The produce of the soil would be immensely augmented. Importation of food would be proportionately lessened. Capital that must have left the country as payment of that importation will be left for trade purposes. In short, it is capable of demonstration that it would be greatly to the benefit of all classes of society to bestow on the tenantry of Great Britain that interest in the soil which justice demands and an equitable Tenant-Right would bestow. *The People's Interest.*—In point of numbers, the owners and tenants of the soil are only "like the small dust in the balance" compared with the mass of people who hold no direct communication with agriculture. John Stuart Mill has represented the owners of the agricultural surface of England as numbering about 30,000. Mr. Disraeli calculates the tenant-farmers at somewhere about 800,000. These numbers with their families and dependants, deducted from the census returns of England, leave about twenty millions as the number composing class third. Although this may not be a correct computation, it may fairly serve to show the vast proportion of our population who are not directly interested in agriculture, yet, indirectly, are so deeply interested in its welfare, and now hold the power to wield a considerable influence over its future destiny. Let us consider if a direct agricultural interest in the soil is attainable by the masses? It is generally assumed that the possession of a direct interest in the soil by a much larger proportion of the population would be a great advantage

to the nation. Such may be the case, but it may be argued, only under certain given conditions. Given a community like the Jews, at that period of their history when they first crossed the Jordan to enter upon their possession of the land of Canaan, and with all the accumulated wisdom of the intervening centuries, I question much if the sages of the nineteenth century could frame a code of land laws better adapted to promote the well-being of the people, or tend more to develop the resources of the country. Yet it will be readily granted that they are ill-adapted to meet the requirements of this our land; even were it possible to apply them, which, for obvious reasons, is simply impossible. Where the resources of a country are nearly or wholly limited to its soil, if that soil is capable of producing supplies sufficient to meet the wants of its inhabitants, it is clear the more equally the agricultural surface is apportioned the greater will be the individual chances of happiness to the community. Great Britain is understood to be unable to produce food for its teeming population; at any rate it is quite certain, were its soil equally distributed at once amongst its inhabitants, and they were confined to what they produced, misery and starvation would be greatly multiplied amongst us. Fortunately other resources are vast, if not abundant, and this fact implies a proportion of the population devoting their energies to the development of these other resources. Whenever such pursuits hold forth greater pecuniary or imaginary advantages than agriculture to an individual, if circumstances permit, he leaves his rural abode, and probably goes to swell still further some of our rising towns. So long as commerce and manufactures continue to offer and supply these increased advantages, society shares in the improvement. Unfortunately the tides of commerce and trade have their ebb and flow. So long as they continue to flow all is well, but when the ebb comes then is the fiery ordeal experienced by a thickly populated country, and more especially by that portion who have felt the slow but moderately sure pursuits of agriculture for the "glorious uncertainties" of trade and commerce. This tendency to leave agriculture and join the hives of industry is thought by many people to be a source of great evil to us as a nation. We believe we are pointed to the Swiss and French peasant proprietors with their small holdings as models of thrift, industry, and comfort. So far as I can make out, it is not that the provinces of Switzerland and France offer greater returns to the agriculturists than the soil of England, but because manufactures and commerce do not there offer sufficient inducements to cause the peasantry to leave the soil and enter their ranks. It would not be difficult to show that in any country where manufactures and trade flourish, and where there is free trade in food supplies, that land must inevitably fall into the hands of the wealthy, and those who make it their business to add field to field. Banish the love of money from the hearts of men, and things might be different. Suppose a man to be the owner of fifty acres, worth a rent of £75 per annum; suppose him to be further possessed of additional capital to cultivate it, he would, according to the Government mode of calculating a farmer's profits, add £32 10s. to his income by devoting his time and attention to the farming of his own land. A capitalist makes him an offer for his freehold at the rate of thirty years' purchase, which, with the stock in trade, would realise somewhere about £2,700. An investment turns up for the money, offering five per cent. with good security. Here is a much larger income offered, with the additional value of whatever his time and talents might realise devoted to other pursuits. Trade or commerce might possibly hold out to him a prospect of 10 or 20 or even 30 per cent. for his capital. No man who aspires after an increase of income would be content with little over £100 a-year from his land, when its capital value dangles constantly before him an income of, it may be, several hundreds. This may account for the sad fact that the sturdy yeomanry of England are gradually disappearing. The calculating, intelligent, small freeholder sells his land, the indolent and dissipated squander it. Under present circumstances the possession of the soil of England to any extent by small freeholders, is, to say the least, highly improbable. A tenant right such as we have proposed, would have a powerful tendency to increase the number of tenant-farmers in England. It is too much the custom of the tenantry of the present day to spread their capital over the greatest number of acres they can possibly stretch it, and they are consequently obliged to allow nature to be their principal agent. The experience of farmers

urges them in this direction. They find that the men who best develop the resources of the soil do not always make most money, and the reason is not far to seek. Such men permanently improve their holdings with a large outlay, and nothing but the value of a permanent interest in such improvements will adequately repay them. It will be seen at a glance that if compensation were secured to the improving tenant, improvements would rapidly multiply, and, instead of capital being spread over two many acres as it is now, it would be concentrated on what is capable of improvement. Lands capable of improvement might be profitably let out into small holdings, and rented by men of limited capital—labour being the heavy item in reclaiming land. If such small farmers could live from the produce of their holdings, the improvements they effected would become capital, and the soil would act as a sort of savings bank, where they could safely deposit the fruits of their labours. Therefore, to give a greater proportion of the community a direct interest in the cultivation of the soil, the laws affecting agriculture will require to be framed in accordance with strictly commercial principles. Let us now consider the desirability of increasing the agricultural population. It will be generally allowed that the greater the number of the population that will devote their capital and labour to the soil the better for the country so long as that appropriation does not interfere with the development of other more profitable resources. Whatever amount of capital is spent on labour to improve the natural condition of the soil is a clear gain to the labour market, and a consequent distribution of capital among the labouring classes. Demand causes a limit to other productions, and they generally require another capital to create that demand. The produce of the soil in this country can never exceed the demand, neither does it need the intervention or capital to buy it. The result is, the more the resources of the soil are developed, the better will be the condition of the labouring classes, and, consequently, the healthier will be the state of trade. The subject might be viewed, under other aspects than those bearing upon the pecuniary interest this third class hold in the soil. The social surroundings of town and city life amongst the lower stratum of society more especially, are generally considered to have a degenerating effect both morally and physically. They sharpen the wits and the intellect at the expense oftentimes of both soul and body. On the other hand, it is also allowed that nothing tends so much to the formation of habits of thrift and industry, and also healthy organizations as pastoral and agricultural employment, especially if the parties concerned have a direct interest in the produce of their labour. We have seen that the tendency of the present age is to crowd still further our already overcrowded towns. What seems to me to be wanting in our constitution is some means of retaining our agricultural population, and also of conveying back to the healthy moral and physical influences of the country those who have so far failed to maintain these qualities that they are no longer able to fight the battle of life without assistance either given or taken from their fellow-townsmen. Acting on the proverb that "Prevention is better than cure," let us see what means can be devised to retain and increase our agricultural population. We have seen how remote is the prospect of any large proportion of the soil being possessed by small proprietors. We have shown how the numbers of the tenantry may be advantageously added. We may now consider the position of the agricultural labourers. The late Parliamentary inquiry into their condition goes to show that in the North of England they command higher wages, are stronger physically and intellectually, and consequently, hold a better position in society than almost, if not in any, other part of the kingdom. May this not be accounted for by the fact that in this said district are located the chief seats of the coal and iron trade, which furnish a species of employment to which the agricultural labourer can readily turn his hand. The consequence is, agriculture must offer similar returns to its operatives as trade, otherwise they cannot be retained. In these districts in the South of England, where their condition is reported to be so wretched, it argues a similar state of things existing amongst the surrounding workmen, otherwise a sad lack of intelligence and observation on their part. In proceeding to discuss this part of the question, the celebrated case of capital *versus* labour, which has excited so much attention of late, comes prominently before everyone of us. This case presented some strange aspects. There came an outcry from many quarters that

labourers for the ingathering of the harvest were very much needed, and were the reverse of plentiful. At the same time the streets of our famous market town were thronged with thousands of idle men. These men and their families were supported by the labour of their own class working in other parts of the country. The interests of agriculture, of every branch of industry, and of every class of society, appeared to be valueless in their estimation, their sole aim being the advancement of their own class interest. Now, whether this class was right or wrong is not the question. What we ought carefully to observe is the fact that one class of men placed themselves in direct antagonism to the interests of their employers, even at the risk of permanently damaging the trade of the neighbourhood, and solely, as they allege, because their interests were neglected by their employers. Now, gentlemen, I am sure we all with one voice can say, May the day never come when the landowners and farmers shall find themselves in this position with the peasantry of England. We must, therefore, not disguise from ourselves the fact that the interests of the landowner, the farmer, and the peasant have not been pursuing the course of parallel lines. These three interests were much nearer the point of contact at the beginning of the century than at the present time, and seem to go on gradually diverging. This in itself is a sufficient cause for uneasiness. We have proposed a method of uniting the interest of the landlord and farmer in the soil. Is there no way of uniting the interests of the farmer and his labourers? An indispensable requisite to this union of interest is sufficient cottage accommodation on the farm, containing provision for their inmates enjoying the comforts and observing the decencies of cottage rural life; vegetable gardens attached are here implied. Many estates are notoriously deficient in this respect. A commission of inquiry to report on the state of cottage accommodation for our farm labourers, taking account of both quantity and quality, might furnish an interesting document. I very much fear a report on the necessary horse accommodation would compare very favourably with it in some quarters. Granting the dwellings up to the requisite standard, we still have to face the difficulty that they have no direct interest in the farmer's success. The day may not be distant that to retain labourers with sufficient intellectual ability and in adequate numbers to carry on the agriculture of this country, the present state of affairs, described as "capital *versus* labour," will require to be modified, and the amended term, "capital *et* labour," used to express the relationship. We may inquire if any plan can be devised to bring back to the healthy influence of agricultural labour that portion of society who, though able-bodied, seem either unable or unwilling to earn an honest livelihood. The proportions that pauperism is now assuming are truly alarming. The annual return on the 1st of January, 1870, shows their number in England at that date to be upwards of one million. And what adds to the alarm and surprise is the fact that nearly one-half of them were composed of able-bodied men and women and their families. When the growing independence of the working classes is spoken of, think of 300,000 children belonging to able-bodied men and women growing up paupers! Think of these children being reared in such an atmosphere—taught that a life of indolence and dependence is preferable to industry and self-respect! Let us take two facts and place them side by side. Thousands of acres of uncultivated land in England, capable of profitable cultivation, and 200,000 men and women and their families, able to work, yet professing to be out of sufficiently remunerative employment to keep body and soul together. The question is—Can there be no way devised to bring together these two material substances that seem naturally made for each other? Intimately connected with this part of the subject is the question of waste lands and how to deal with them. It is pretty confidently affirmed by many profound thinkers that in the enclosure and appropriation of common lands that have been going on these last 50 years a larger proportion of the poor of the several districts have been robbed of their inheritance. It looks, to say the least, suspicious that three or four thousand acres should be parcelled out amongst existing proprietors, and perhaps two acres allotted to the poor. At the same time the enclosure of commons and making them real property, either individual or corporate, is an undoubted benefit to the country. My experience in connection with an extensive unenclosed common led me to the conclusion that commons are one of the best nurseries for producing a thrift-

less, indolent, dishonest population—the most certain way of keeping land in its primitive condition, or of having its cultivated portions thoroughly impoverished. Some of that land which before the enclosure was not worth a rent of 5s. per acre has since been let for £3 per acre, and hills and valleys that were literally deserts have been converted into fruitful fields. Where they are conveniently situated, might not land and institutions be provided where destitute persons might be able to earn money, and where vagrants would find that food, lodgings, and clothing could be had for working, but under no other conditions? The town of Hexham seems to have at present a peculiarly favourable opportunity for trying an experiment on a small scale. I see from the papers it is proposed to provide a scheme for disposing of Tyne Green for some public purpose for the advantage of the inhabitants of the town of Hexham. Now, what could be more to the advantage or credit of the inhabitants than their Local Board providing employment on Tyne Green for the destitute able-bodied poor, thereby giving those a chance who were willing to earn an honest wage, and would assuredly keep the town rid of those notorious scoundrels known as professional vagrants? The probability is that the scheme would be found self-supporting; if so, it would cause a sensible diminution in the rates. The North-Eastern Reformatory at Netherton, near Morpeth, affords a striking example of how productive employment may be found on poor land for one class of society that needs to be taken in charge by the nation, viz., juvenile criminals. I had the privilege not long ago of being shown over the institution and the farms worked by it, and take this opportunity of bearing testimony to the excellence of the scheme, and also the practical manner in which its details are worked out by the resident manager, Mr. Anderson. There 150 lads may be seen, drawn from the very scum of society, learning what in their class may be called the art of honest, productive labour. A large proportion of them wear the hue of health on their cheeks, and show well developed muscles, affording a striking contrast to the pallid cheeks and flabby appearance of the corresponding class to be seen in our workhouses. The institution commenced with 40 acres of land, but a short experience warranted the committee in making considerable extensions, and two years ago they further enlarged their borders, and now farm 486 acres. It is no libel on a certain portion of this recently acquired land, now in process of being broken up, to say that for agricultural purposes it is in its present condition valueless. No manipulation will make it produce a crop that will repay cultivation until the infusion of some powerful fertilising agency. The annual application of about £200 worth of town manure which the farm receives, in addition to the quantity made upon the farm by the extended system of feeding (38 head of cattle were at the time of our visit upon full feed, turnips, cake, and meal), together with the trenching and system of spade husbandry carried out, is rapidly changing the whole aspect of the place. The farm accounts for the last year show a balance in favour of the institution. About 71 per cent. of the lads discharged are known to be doing well, which fact affords the best proof of the practical benefit the institution confers upon society. It is devoutly to be wished that the Reformatory at Netherton will prove the pioneer of many similar institutions. There the problem has been solved how to provide honest productive labour on the soil for a class who would never either seek or find it anywhere but under compulsion. Society would rid itself of a great burden by extending this provision to other classes whose liberty of action has furnished proof that they mean to live by preying on their fellow creatures. It is not beyond the bounds of probability that schemes will be hereafter carried out on a very extensive scale for the cultivation of unreclaimed lands by public companies, who, with Parliamentary powers and Government aid, will buy up such lands, build, plant, and cultivate, not solely for aggrandisement, but from commercial and philanthropic motives combined, composed of persons who will endeavour to make it impossible for any one to say in their hearing or district that they cannot find employment. It will be observed that I have confined my remarks principally to the agricultural interests of the people in the soil. Though I may have exhausted your patience, I feel I have very far from exhausted the subject. I would just add that there is a spirit of inquiry abroad, and a sifting of authorities and instructions that will certainly produce important results, it may be ere many years elapse. There is a

growing feeling of independence exhibiting itself amongst the more thoughtful portions of all classes of the community. This feeling is fostered by the present prosperous state of trade throughout the country. It will be well for England if some of the disturbing elements abroad in society could be amicably settled during this period of prosperity. Although it is perfectly true that individual effort is the only way of securing the blessings available to humanity, and that no human agency can ever permanently benefit any person or class that won't help themselves, yet these truths furnish no excuse for continuing any system that has been tried in the fire of experience and found wanting. The laws of nature framed by unerring wisdom furnish the best precedent for the regulation of human laws. Nature's laws have decreed that every unit of humanity is dependent on the products of the soil for the means of existence. It may be safely inferred from this one fact that no portion of the community can assume to constitute itself the sole and unquestionable custodian of that channel through which flows the bountiful provision the Almighty is continually supplying wherewith to bless mankind.

The CHAIRMAN said that the paper was a very comprehensive one, and embraced such a wide field that it was a very difficult thing to take it up and criticise it at that moment. Different points would, no doubt, strike different members, and if each person would give his observations, they might be able to gather together a certain amount of collected wisdom more than they could expect from one individual. There were a great many points in it—if they could be retained in one's memory—that he would be anxious to make observations upon; in some of them he fully agreed with Mr. Bell, in some he was a little doubtful, and in others he altogether differed from him. He would be glad, however, first to hear what any of the members of the club had to say upon any points that struck them.

Mr. JOHN HOPE, jun., said he was considerably interested in the question that had been brought before them. Mr. Bell had placed before them the land question in some of the very important relationships in regard to the three great classes—the landlord, the tenant, and the consumer, or the people. In many things he held advanced notions, yet he had not the slightest sympathy with anything that savoured of revolution or disorder; he simply went in for that which was dictated by good sound common sense and with a due regard to the interests of all parties, never forgetting that most important section of the people—the British public. Adam Smith laid it down as one of his first axioms that land stood first as a means of investment for capital; and reasonably so, because they had to work up to certain fixed laws—they were not dependent upon the fraud or deceit of mankind—they were not dependent upon the fraud or deceit of mankind—they were tolerably safe in that respect, for the agriculturist stood in a much firmer position than the manufacturer or the merchant, and, with certain percentages, he was tolerably free from bad debts. Mr. Bell brought before them the landlord's interest, and he might say that his own opinion was that no man who had property had a right to use it to the disadvantage and to the loss of the community at large. Property was not given for mere personal pleasure; it was a stewardship of which they would have to give an account, and such property might be made highly productive and a source of real value to the nation. It was, however, impossible for landlord and tenant to work together unless there were wise laws governing both, and it was essentially necessary that there should be good laws regulating the relationships between landlord and tenant; and it was also to the interest of the third class—the people—to see that there were such laws, in order that the tenant might be encouraged to grow the largest possible crops, and also to enable the landlord to preserve his land in a good state of fertility, and to protect him from bad tenants. He believed that this country could produce almost as much food as would feed the present population, provided there were none wasted, and they made every acre of land produce its full portion. If they kept its producing power down below par, as a matter of course they would have poverty, because instead of producing it at home they had to send away for the raw material, with all the freight and labour added to it into the bargain. Speaking of the relations between landlord, tenant, and people, Mr. Bell gave them an instance where the wealthy classes forgot their poorer relations. He referred to the distribution of common lands, in which such a small quantity went

to the poorer class. Small farms well cultivated he held to be better for the nation than large farms not fully cultivated. If they wished to rear a sturdy peasantry they should give them an interest in the soil—some condition of profit. As the time of the club was precious he would simply say that he cordially agreed with almost the entire portion of Mr. Bell's paper, which he considered sound, useful, and practical, and one likely to do good.

Mr. GRAY said that there were many interests connected with agriculture, but the three leading interests were those of landlord, tenant, and labourer. He had given the paper his best attention, and he felt a little disappointed with the way in which Mr. Bell had spoken of the labouring class. It was well enough to give them an interest in common lands and in the cultivation of the soil, but they were aware that the working class had received an increase of wages and were shortening the hours of labour, and the subject of farm labourers' hours might have been a little more entered into. He quite agreed with Mr. Bell that if they could only banish the love of money out of the hearts of men all would be well. But whatsoever they wished men to do to them they should do to others. While they complained of landlords not granting them the privileges they ought to have, he did not see that they always granted the labouring classes the privileges they ought to have. They ought to do something for the labouring class, although much had already been done for them in the way of better cottages and so forth. In reference to the hours of labour, they found that all other labourers were getting shorter hours and half-holidays and other privileges which farm labourers did not enjoy. He did not go in for half-holidays for farm labourers, as he did not see the necessity for them as there was in large towns and in manufacturing districts, because their labourers breathed the fresh air every day. He thought, however, that it was hard for a man to be constantly confined to his work from six o'clock in the morning till six o'clock at night, and he suggested that they should have some portion of time in which the labourer, his wife, and family might attend to domestic duties and their own private concerns. He might say that Mr. Lee, of Dilston, had been in the habit of giving his men two hours on the Saturday afternoon, and they heard of Mr. Stephenson, of Throckley, giving his labourers a half-holiday every alternate week. He thought, that in a social point of view the farm labourer ought to have two hours on Saturday afternoon, and he considered he had a right to it. In many cases the labourer's wife had to work out of the doors, and perhaps they had a family, in which case the elder children had to take care of the younger ones, and on Saturday night they found they had a great many things to do which they could not find time to do in order to prepare for Sunday. He knew of many cases in which the man had to make the marketing, while his wife had to attend to other duties almost up to midnight. They were bound to look at this matter in a religious light if they expected them to attend a place of worship on the Sunday, and they believed that Sunday-schools were becoming more and more needed in this country, and were more and more becoming a religious institution, and, in his opinion, the farm labourer had a right to a certain amount of time on Saturday afternoons, in order to prepare for Sunday worship and to enable him to send his children to the Sunday-school. In many cases there were excuses of this kind given with reference to the absence of children from the school on a Sunday morning. The wife said there were so many little things to do, stockings to darn and clothes to mend, and people did not wish their children to go to the Sunday-school unless they were decent and tidy. They heard some farmers say they could not afford it, because they had to pay such a high rent for their land. The reply to that objection was that it was not a question of affording—every man could afford to do what was right. Another class said they would not use it right. That was not the question; if it was right for them to have it, it was right for them to give it whether they used it right or not. He thought of bringing a motion before the meeting to the effect that a committee be formed to consider and discuss the whole subject of landlord, tenant, and labourer. Perhaps that was too comprehensive?

Mr. ANDREW WOOD: Not a bit.

Mr. GRAY said he would move that a committee be appointed by this Club to discuss the whole subject, and try to bring about or lay some basis down by which all things might be

arranged, and the united welfare of all these classes—landlord, tenant, and labourer—be increased.

Mr. ANDREW WOOD seconded Mr. Gray's motion that a committee be appointed, or another meeting be convened to discuss Mr. Bell's paper, which was so exhaustive and contained so many points worthy of careful attention, that they could not sufficiently notice them at that time, but if they had the paper printed and before them, he had no doubt but that they could discuss it much better. It was, indeed, a first-rate paper, but there was one point he wished to draw their attention to. A great deal had been said about work, and about making work for labourers by enclosing commons and such as that, and putting vagrants to work on Tyne Green. But they would have to supply the will to the tramps, and give them the will to labour, as well as the chance of labour. At present they could hardly get men on the roads to break stones, notwithstanding all the sturdy tramps that were going about. There must be some law to compel men to work.

The CHAIRMAN: If they will not work, neither should they eat.

Mr. WOOD: That is the simplest way to deal with them. They should not let all their attention be directed to the labourer; the tenant, the improving tenant, he wished to point out, had often to pay for his improvements when he took a second lease, while the tenant who had not improved got the farm at the old rent. That was a point which ought to be well considered by the Club.

Mr. JOS. LEE said thanks were due to Mr. Bell for his excellent paper, and remarked that there were some points in it with which he could not agree, neither with what Mr. Wood had said. He had known several cases where landlords had seen where the tenants were improving their property and had acted honourably and granted them liberal leases, and they must not condemn them as a class in that respect, although in many cases they did not act so liberally. Certainly, he considered the owners of the land had a monopoly in that land; the tenants had no control over them. Take, for instance, their own county. Suppose they wanted a farm, and went to a landlord and said, "We wish to take a farm free from all destruction of hares and rabbits," for they might let the other game alone if they got rid of the hares and rabbits. For nine-tenths of the land in the country the agents would say to them, "You must take the farm upon these terms," including the game, and they had only Hobson's choice. They could not say that the tenants were to blame. It was said that under an Act of Parliament, considered to be a liberal Act, all the game was given to the tenant; but the consequence was that the makers of the law avoided that law, and made it a condition when the tenant took the farm that he was to let the game go back to them again. The makers of the law in that case avoided the law. In many cases farmers had shamefully abused the privileges given to them when leaving farms. He had seen where a farmer had farmed for thirty years, and when he was done with the farm he would in the last two or three years run the land down so that it might be the least possible value for re-letting. He had seen tenants at the end of a lease run the land down so as to be in such a state as to lessen its value in re-letting. It would be well if laws were invented to avoid these cases—both the advantage which the landlords take, and the advantage which tenants take. If they looked at the three classes, he considered that the labourers had done their duty better than the other two classes. Mr. Gray had referred to him allowing his men and women to go off work at four o'clock on Saturday afternoon, which he had done for some years, and with no disadvantage to himself, and he thought with great benefit to the labourers. He had several things jotted down, but time was spending, and if they agreed to meet another day to continue the discussion they might be entered into at that time.

Mr. JOHN RIDLEY proposed a vote of thanks to Mr. Bell for his able paper, and expressed his surprise that no tenant-farmer had taken up what he considered to be the most important part of Mr. Bell's paper, namely, the subject of tenant-right. It was in his opinion the most important question that had come before that Club. With respect to the rights of the labourers, he thought that good cottages, good education, and a fair day's work for a fair day's wage was the best right they could have.

Mr. TROTTER (Secretary) said he should have been glad if the Chairman had stated his objections against those parts of

the paper which did not meet his views, as they would then have had something to battle against. His own opinion of Mr. Bell's paper was that it was good in principle throughout, and with respect to the tenant-right part of it they would have that discussed at the annual meeting. He was glad to be able to give his full weight—however much or little that might be—to the principle, and he thought that Mr. Lee's arguments went to strengthen Mr. Bell's case very materially.

Mr. LEE said he pointed out the necessity for some laws being enacted, so that neither landlord nor tenant could take any undue advantage of each other.

Mr. TROTTER thought that Mr. Lee's arguments proved the correctness of Mr. Bell's views. They had, however, rather got from the subject of the paper, and all the speakers had alluded to subjects very much beyond the question, which more particularly had reference to the improvement and progress of agriculture. The laws which regulated the business transactions between landlord and tenant were unfair, and therefore, unjust. If a tenant got into difficulties and was unable to meet his creditors, all the creditors must stand aside and be content with perhaps a farthing in the pound, or it might be nothing, while the landlord received twenty shillings in the pound. That was not the only black view of the case, for if it was known that a tenant was in a little shortened circumstance, and there was some probability of his stock being pounced upon by his landlord, he could not let his turnips so well as in affluent circumstances, because the stock feeding upon these turnips were liable to be seized. It must appear at once unjust and unfair for a man's stock to be seized to pay another man's rent. Suppose he was in rather straitened circumstances, he let Mr. Lee twenty acres of turnips, and before three months were over he got into difficulty, Mr. Lee's stock would be pounced upon and sold to pay his rent for that year. That would be unfair to the rest of his creditors as well as unfair to Mr. Lee. If it was thought proper to postpone the discussion he should be very glad, but so far as the tenant-right part of it was concerned there was a fair prospect of that being ably introduced and ably discussed at the annual meeting. He had great pleasure in joining Mr. Lee and Mr. Ridley in moving a vote of thanks to Mr. Bell for his able paper.

The CHAIRMAN said that Mr. Trotter had found fault with the speakers wandering from the subject of the paper, but he thought that all the observations of the speakers rose out of one part or other of Mr. Bell's paper, except those of Mr. Trotter, which were upon the law of landlord and tenant, which was not included in the paper, which was upon the interests of the landlord, the tenant, and the people in the soil. He should not attempt to make any observations upon the paper that day, but if the members wished to have another meeting after having the paper put into their hands in print he was sure they would spend another day with profit in discussing it.

The vote of thanks to Mr. Bell having been unanimously carried, Mr. BELL returned thanks.

It was then resolved to adjourn the discussion till Tuesday, January 2nd.

At the adjourned meeting for the purpose of resuming the discussion,

The CHAIRMAN, Mr. C. G. Grey, said that without thoroughly going into Mr. Bell's paper he would allude to one or two points in it, and perhaps that might excite some little debate amongst the members of the club. He jotted down one or two things as the paper was read, but if he had read the paper closely probably he would have found one or two more things to talk about. The first thing which he noted down was that a country which did not grow sufficient agricultural produce for its own consumption necessarily had to import food, and the importing of food and paying for it impoverished the country. He differed from that—on a question of economy—altogether. Set apart an island, purely agricultural, say the Isle of Man; if that island could not grow enough to support its own inhabitants, and had to pay money to import food, it would be a most ruinous speculation, and decidedly contrary to all proper notions of political economy. Take another island of the same size, cover it with iron furnaces and manufactories; they would import food and export goods, and that country could afford to import ten times the quantity of food it could consume. It would lose nothing by importing its food, and it did not follow that importing food was a ruinous proceeding. The more this

country increased in mineral productions and manufactured articles, not only of iron, but articles such as cotton and wool, the raw material of which was got from other countries, the more they increased the population on account of these manufactures, and they could more afford to pay for the food from other countries, and there was less necessity to support the population on the food grown at home. He did not say that was any argument that they should not grow as much as they could to support the population; what he meant to say was that this country went on prospering in its manufactures and commerce, and if all the land that was wasted, as some people said, in parks, deer forests, and so on, was brought into a high state of cultivation, he much doubted that they would have sufficient food, and they would still have to import, owing to this country being to such an extent a manufacturing country. They admitted that they must import food, and they had to compete with other countries that grew food cheaper, and the question was for them to consider how they could grow the largest quantity of food on the land they had by such appliances as would pay them for doing so. They might go to Allendale Common, and by expense grow turnips and even corn there, but he did not think it would pay. They must study the climate and altitude of land, and apply the assistance they got from chemistry and other sciences to their climate, and so on, to discover what they could grow in every separate place with the greatest advantage to the country, not forgetting the profit to their own pockets—a matter which no doubt they would always remember. He should go gently indeed over the game question, as it was one that always raised a great controversy, and he would not have alluded to it, but Mr. Bell said it was not a question between landlord and tenant. He thought it was essentially a question between landlord and tenant, although the law in regard to it might be altered with advantage. He had stated his opinion upon this question over and over again. The game by the law was the property of the person who had the farm, and if he voluntarily gave up his right to it it was his own fault. It was entirely a matter between landlord and tenant, but how there could be any question of its being the property of the public he could not see. Suppose he went to a person in the neighbourhood who had a farm to let, and said he would farm it for him for £500 a year, and made a bargain to have the game; he grew as much as he could, for he took the farm and the game from the landlord, and he would see that it would pay him, there being a demand from the great manufacturing people: they wanted rabbits and hares, and gave tremendous prices for them, and these men who got their wages by the nine hours' movement liked to have coursing and live rabbits. He might make a good deal of money from the game, and was entitled to have it as much protected as his sheep. Ought idle men to be allowed to take them from him? They had no more right to take his game than they had to steal his geese or turkeys. Some people advocated that hares and rabbits were not the property of the land on which they grew. He would make game property, and he would have a man taken up for taking a hare out of his field just as he would be for stealing his ducks. That was his view of the question. The question of land being a monopoly had been touched upon, that the tendency was to diminish the number of proprietors, and connected with that remark was the law of entail, and by the law of entail the nation took upon its shoulders the evil deeds of the son of the entailer of the property. He thought there were a great many evils connected with entailing estates, but he thought when they carried out their theory of a nation taking the responsibility of a spendthrift son, it was exactly the same as a person who had accumulated wealth in manufactures, in railways, or any other enterprise, and who had a spendthrift son and a blackguard. The old man saw his son would spend all his money and leave his children paupers, and he determined not to allow that, and settled his money on prudent neighbours as trustees, and said to them allow this young fellow so much a year as long as he lives, and at his death divide the money amongst his children. If a man had a right to do that in one kind of investment he had a right to do it in all. All that he claimed was equality. If a man was able to tie up much consols and so many railway shares in the hands of trustees, then a man ought to be able to tie up land in the hands of trustees, so that his son would not be able to spend it and leave his grand-children paupers. He would, however,

make such measures as would ensure these trustees the power of managing their property as landed property should be managed. They ought not to say to a man that he must leave his property to a spendthrift son who would leave his grand-children paupers. He admitted that the tendency was to diminish the number of proprietors. If a man chose to invest all his money in North-Eastern railway shares, had they a right to make a law, and tell that man he had got too great an interest in the company and compel him to sell out shares and invest the money elsewhere? If a farm was put up for sale, they had no right to say to the Duke of Northumberland that he must not put in for this farm because he had got enough land already. If they had a right to say that he had got enough land already to any person, were they not injuring the man who had the land for sale? Had any one a right to go to a farmer's wife selling butter and eggs, and say to a rich person, "You live in a big house, you can afford to go elsewhere, you shall not buy this woman's butter"? He had been a free-trader all his life, and was so still, but it would not be free trade if they put any prohibition upon land if any one had a farm to sell. The tendency was to buy up small proprietors, because from the earliest days of the history of England, persons had always considered it to be a privilege and an advantage to be landed proprietors. So long as it was so, and so long as that privilege was not held to be an exclusive privilege which other people did not enjoy, it was simply the free will of the people that they would rather be landed proprietors than proprietors of any other kind of goods. If a man chose to invest his money at 2½ or 3 per cent. in land, or 3½ or 4 per cent. in funds, or 8 to 10 per cent. in railways, or 20 per cent. in trade, he had a right to do so, and they had only to guard against giving the landed proprietor any privilege over the owners of other kinds of property. He had heard of small proprietors selling their estates and doing better as tenant farmers, and had even heard of a man thriving and paying rent on the farm which he had sold and could not live on when he had no rent to pay. It was a tendency of the age to diminish the number of proprietors. A person having a small property worth £400 or £500 a-year, instead of spending his life in cultivating it, could get 30 or 35 years' purchase, and by selling out and going and speculating in ships and trade he could double or perhaps quadruple his income. And why should he not, if he could quadruple his income by investing his money in trade, for what good would this little farm do to him, as he would have to leave it to his eldest son, and the rest of his children would have to make their way as best they could? For many years past these small proprietors had been disappearing from the face of the country, they sold their land to large proprietors, and he had no doubt but that these men were doing better by investing their small capital in a more remunerative way than in land. He did not know but what these people were the gainers by it, and also that the country would be gainers by it. As to the law of transfer, he agreed that it ought to be as simple as the transfer of railway shares or anything else. He thought that a man ought to be able to sell his field or his farm without going to title deeds and running up a lawyer's bill, which did no good to anybody. As to the tenant's interest, he did not make full enough notes on that to go fully into it. It was a question whether the tenant's interest in land was more than simply a mercantile bargain between him and his landlord. If they said it was not, the landlord would say that he would farm his own land and not let it at all. If that was done generally it would altogether alter the position of the country. That it could be done he had no doubt; it could be done very well, a landlord could manage his own land, though it might be a large undertaking on a large property. A landlord could manage to farm all his own land; he could find good men to act as stewards and managers, pay them fixed salaries and also percentages on profits. That was a system he had tried himself and found to answer well. These men would be paid 5 or 10 per cent. on the profits, taking stock once a year. If landlords chose to do away altogether with the class of tenant-farmers it would entirely revolutionize the country. Who would say that these men had not a right to do that? The farms being let to tenants was simply an expedient, as it was far less trouble to the landlord to take so much a year and let the tenant make as much as he could out of it. This principle was applied in other ways; they farmed out tolls and a great many things of that kind; a fixed sum was paid

and the man could make as much as he could out of it. If it was purely a mercantile transaction, the letting of farms, it was merely the making of a bargain, and that they would make the best of the bargain he had no doubt, if there was not too great a demand for farms. Tenants had it always in their power to make a fair bargain with their landlords; good tenants, at any rate, always had, bad tenants might not have that power. If they admitted it was a matter of contract and bargain, the tenant made his own terms, and he made them for so many years. He was bound by the landlord not to do certain things which a landlord thought would damage his property, as he had a right to have it back in as good a state as it was in at the beginning. If he got it back better than it was before—and that was a question Mr. Bell took up—whose was the increase? He would ask another question, if a man took a farm at £300 a-year, and gave it up worth only £250 a-year, whose was the loss? One question should answer the other. He had known farms given up at the end of a lease worse than they were at the beginning of it, and what remedy had the landlord? He had to seek a tenant, and only get £250 a-year for his farm, and on Mr. Bell's principle it was never again to be more than £250, so that landlord's properties could diminish, but never improve. He did not believe in that at all; that was not his idea at all. He had himself taken a farm of over 700 acres during the minority of a young man, and he had it only for 13 years. He began to pull down a lot of useless fences, and he spent some money in draining beyond what was allowed in the case of money borrowed from Government for draining purposes. He had to cart the artificial manures up a hill to the farm, but he got good crops of turnips which he ate off with sheep, and splendid crops of seed, and got good grass land where there was bad before. Some of his neighbours said to him, "You are spending a great deal of money on this place. It will improve the land very much." He said that was just what he intended to do. They said, "But you have only got 13 years of it." He said he did not care for that if he only got his money back. They said, "The landlord will get better land back." He said he did not care a fig for that as long as he made a good deal of money. In the last few years he made £600 or £700 a-year on capital of £2,000 or £3,000, but if he had only spent £500, and not got £100 profit, which would have been the best investment? His neighbours advised him not to spend his money for fear of benefiting his landlord at the end of his lease, but then he did not care for that if he did himself a benefit. If they got a farm for 21 years they could calculate how it would pay. Some people were afraid to do good to anybody else except themselves, but in any kind of trade if they were doing good to themselves they were doing good to somebody else generally. In taking a farm it was the tenant's own speculation how much money he made during the lease, and if he improved the farm during the lease had no one else but the tenant to benefit by it? If a farm increased £50 in value, Mr. Bell's notion was that the tenant who was leaving should get this £50, the new tenant who took the farm would have to pay the full value and the landlord would only get his old rent. They would give the landlord an annuity, so much a year off the estate, he would not spend a penny in buildings, he was secured, he had a fixed rent, and the man who got it increased in value got this for ever. This tenant, say, made the farm worth £800 a year, when his grandson got it he gave up farming and sub-let it to another, and thus they got a class of middlemen, and it was these middlemen that grind the tenants under them till they had not got a coat on their backs. It was much better for the country—he had seen both sides of the question—for tenants to take these farms for a certain period of time directly from the landlord. If the tenant was not tied to it he would not sub-let, but he would go away and take his capital and invest it in other business if he chose. The best system of letting farms was not to tie a tenant down for ever to a place, but to allow him to leave the farm after a certain period and invest his capital in any other business to his own advantage as he thought best. He did not say that there could be no improvement made in the condition of letting farms; he would like to see a system devised over the whole country to avoid litigation by putting down in one universal code what was the custom of the country, &c. The late Mr. Pusey, one of the pioneers in agricultural improvement in this country, tried to make such a scheme, and intro-

duced a Bill into Parliament with that view, but he met with a good deal of opposition to it, and never to this day had it been carried out. He thought they would all agree that a good deal ought to be done, and as far as possible for what the tenant really did leave in the land he ought to be paid for it. In Lincolnshire they had a regular system of tenant-right. It was supposed that a certain quantity of manures would last so many years in the land, and if a tenant had not occupied the land that number of years so much was due to him from the next tenant. Here they had the same thing in the away-going crop. A certain quantity of the land was allowed to be cropped, and the tenant after he had left his farm came back and took his crops, supposed to be the produce of what he had put into the farm. That was on the same principle, and he would extend that principle where it could be fairly shown that the tenant had not reaped the benefit of what he had put into the land. From what he had said they would infer that he entirely disagreed with Mr. Bell that tenants were not justified in high cultivation. He said they were, and it would pay better to cultivate high than to cultivate low. Then, as to the people's interest in the land, that was a very wide question. Mr. Bell in his paper quoted from Mr. John Stuart Mill to show that there were only 30,000 landowners in the country. Mr. John Stuart Mill used those figures for a different purpose than Mr. Bell did, and made a great handle of them. But it was entirely untrue; the figures were taken from the census returns, but these returns only gave what a man's principal occupation was. Many tenant-farmers were also landowners; he returned himself as a land agent, but he was also a landowner, and many gentlemen in Newcastle—lawyers, tobacconists, and others—were landowners, and many of them had considerable property. Instead of 30,000 he thought there were more like 300,000 people who would own land in this country. There could be no question that the people had an interest in the land, and that interest was shown by Parliament asserting its right to take land for the public welfare. It could compel the sale of land for railway purposes and for sanitary measures and several other things. No doubt that right of the public—represented by Parliament as he presumed it was—might be extended considerably in any place where it was shown that it was for the public welfare. The country, represented by its Parliament, had the right to interfere, and take that land by paying the full value for it, and the proprietor must invest his money elsewhere. Whether the interest of the public extended beyond that, admitted of a great deal of argument—whether the public had a right to say to a man who chose to lay out his land in parks and ornamental grounds that it was not producing as much food as it might do for the country, and insist on it being put into tillage. It was a grave question whether the people's interest went so far, and it was a question whether a man had not a right to lay out so much of his land for his pleasure and amusement as a man had to spend so much money in other pleasures and amusements. If the people for their food were entirely dependent upon this country, and if sufficient food could not be procured without turning every gentleman's park and every poor man's little flower garden into wheat fields, then Parliament had a right to say the people must have food, and take from them their parks and flower gardens, and grow wheat upon them; but until that time arrived, he did not see that Parliament, as the representative of the public, had that right. If Parliament had that right it would have to be carried out to its full extent. If they took the gentleman's park from him for the good of the country, they would have to go to the tenant-farmer and say that he was not cultivating his land as well and growing as much produce as he ought to do, and they would also have to go to the poor man and take away his half chain of land on which he was growing flowers for the flower shows. What was sauce for the goose was sauce for the gander. That was his idea of free trade; if they laid down theories they would have to carry them out to the fullest extent. Something was said about the enclosure of commons. A common was a piece of unenclosed land, surrounded by land acquired by purchase, or by descent, or by encroachment, which was from time immemorial, and thus became a matter of right, or by murder if they liked (as suggested by Mr. Trotter); but time had confirmed the title of commoners on the owners of adjoining property, and time, and a long time indeed, had confirmed the right of commonage of these people

on that land. It was theirs; the common belonged to certain proprietors, and if anyone ventured to put 1,000 sheep on that common, had the commoners not a right to say, "This is ours; you have no business to put your sheep on it at all." The commoners had as much right to common as a man had to his freehold house and garden. He admitted the claim of the country to say through Parliament that certain things were necessary. Cities were too crowded, and therefore Parliament granted powers to take the land adjoining for a public park, but they could only take it from him on paying him the full value for it. If 1,000 acres of Allendale Common were needed to keep the people of Northumberland in health, he would say by all means take Parliamentary powers to take it for public recreation. He differed altogether from people who said that these commons belonged to the public. It would come to this—the public had a right to walk over their farms, with guns, of course, and dogs, and go where they liked. He maintained that his wheat and turnip fields ought to be as much protected as the manufactory or the mill—[Mr. TROTTER: The foxhounds?]—The foxhounds have no right to go over the farmers' fields; it was merely a matter of good feeling. Most people thought it good sport, and kept it up in the country, but if people said they would not allow it they had a perfect right to keep the foxhounds off their land. He had given them his idea in respect to commons, and closed his observations on Mr. Bell's paper. Mr. Hope, in his speech, referred to the interests of the great British public; it was a grand-sounding expression, the great British public, but meant simply people who had mouths to fill and backs to put coats on. If an owner was "Steward to the great British public"—he presumed Mr. Hope meant an owner of land—he would agree with that gentleman if he would extend the expression so as to include owners of all property, and that all property was held for the good of mankind, but not land more than grass seeds, cheese, or anything else. Mr. Hope made a successful remark about produce, and importing manures from abroad; it was a question he always brought before the club whenever he could. They spent a great deal of money in importing manures, and allowed to go into their rivers to destroy the fish and poison the atmosphere as much manure as would manure the whole country. He thought if they insisted upon their representatives in Parliament devoting their time to useful legislation, such as the pollution of rivers, the waste of sewage, and the waste of all kinds of manures at home, and sending money away for foreign manures, and looking better after these interests, it would be better than fighting at elections to send a man to make speeches about the great British public, and wasting half the time with high-down speeches about the politics which Mr. G. O. Trevelyan, the Hon. Anberon Herbert, and Sir Charles Dilke went spouting about. It was all very well to discuss politics in theory, and see how far they could extend them, but in the meantime their pockets were suffering from oppressive local taxation, the pollution of the rivers required looking after, and many other things, and nothing more than the sanitary conditions of towns and villages; yet the people were dying from typhoid and other fevers, the produce of farms and towns was going to waste, and they allowed their members of Parliament to make themselves conspicuous in the land by making speeches about politics which would not do them nor their children the least good. There was an allusion made in *Punch* to the nine hours' movement: a workman who had got the nine hours returned home and began to grumble about this and a hundred other things. The man's wife replied it was very well for him to grumble who had got the nine hours, but she had worked fifteen hours, and had to go on working while he sat by the fireside grumbling. He did not see but that the poor man's wife ought to have the nine hours too. Mr. Wood made the remark that the tenant who did not improve got his farm again at the same rent. His way was to let a farm for twenty-one years, and if he saw there was room for improvement, and there was no improvement made, he would let it to some one else at the same rent, but not to the same person. If a farm was not capable of improvement by fair farming, it was quite fair to let the tenant have it at the same rent, and he did not see why he should not get it at the same rent if he farmed fairly and properly.

Mr. TROTTER said that the subject of tenant's right had been brought prominently out, and it might be as well to follow

out the Chairman's remarks upon it. He held with Mr. Bell that the tenant was fully entitled to the improvement made upon his farm. Suppose a small farm was let at an even rent of £100, it was quite possible that a good tenant might, in the course of ten years, increase its value fifty per cent., by increasing its value £5 every year. The question naturally arose, to whom belonged that £50? Was it a question that he who sowed should reap? or was it a question that the landlord should reap all the improvement of the farm which had not cost him the strain of a single muscle or a single thought? and, what was more, that £50 a-year in all probability represented all that the tenant had made during the time? If he sold his stock and crop at the end of ten years he would very likely find himself no better man than he was at the beginning of his lease.

The CHAIRMAN: He's been spending his money very badly.

Mr. TROTTER said many men were losing money by farming. One gentleman near Newcastle improved his land till he became a bankrupt in three or four years, and another tenant who had come after him was making a fortune of it.

The CHAIRMAN: It was a bad speculation; the man had invested his money foolishly.

Mr. TROTTER thought that a tenant who improved the value of his farm to the extent of £50 a-year was entitled to receive £1,000. It was said where was the landlord to get £1,000? let him borrow.

The CHAIRMAN: What security of getting it afterwards?

Mr. TROTTER: He could borrow at four per cent., which left him a margin of £10 a-year. Ten per cent. he called a fair increase in the value of property in ten years. It was asked if the land decreased in value how was the landlord to be paid? At the end of the ten years, as the law stood at present, the landlord could come at the tenant for dilapidation of fences and buildings in that way. He held that it was a landlord's own blame if his property went backward; he was induced to take the offer of the tenant who bid the highest rent, for if the tenant failed he had the first chance of all his stock and crop. He always regarded this as one inducement which caused tenants to give more rent for farms than they could possibly make out of the land legitimately. Then with respect to the law of entail, which seemed to have the Chairman's approval, he admitted that where a gentleman had a spendthrift son, and was in possession of entailed estates, he was awkwardly placed. But he might have a second son, a steady, industrious young man, yet he was bound by the law of entail—a very cruel law—to leave all that property to his first-born, although he might be a squanderer and a spendthrift.

The CHAIRMAN said Mr. Trotter made a mistake. It was a common mistake that an estate went by the law of entail to the eldest son from generation to generation. A man who had an estate could settle it upon his son's son, that he should inherit it, but he could not settle it beyond that. If his son and grandson chose they could break the entail. It was a mistaken notion that they were forced to entail from father to son.

Mr. LEE: If it was entailed upon the eldest it could not go to the second son.

Mr. TROTTER: If a gentleman came into the possession of an entailed estate, it went to the eldest son, he could not leave it to his second son. It was a hard thing if a man came into possession of an entailed estate he could not leave his sons equal portions of it; the first-born came into possession of thousands of pounds and the others might go a-begging.

The CHAIRMAN said a father might leave to a son £10,000 in railway shares in the same way. It might seem hard, but it was the fault of the father and not of the law.

Mr. TROTTER held that the law was really bad, and it was no use them meeting to discuss these subjects if their object was not to endeavour to get faulty laws rectified. Laws ought to proceed from justice, and not justice the offshoot of law. If property was left to a gentleman and entailed to be left to the eldest son throughout no one could leave it otherwise until the entail was broken.

The CHAIRMAN said that any of them could break the entail. A father left an entailed estate to his son, and that man and his eldest son could break the entail, or it was broken at the son's death. The person could not entail it unless his eldest son joined him.

Mr. BELL remarked that the owner of the property could refuse to allow his son an income after he had attained his majority until he agreed to re-settle it upon his eldest son, and so the thing was perpetuated in that way.

The CHAIRMAN said it was done by individuals, and not by the law.

Mr. TROTTER: Suppose a man is in possession of an entailed estate, and he was a fast man, could his creditors seize upon the estate and sell it? If not, it was not in accordance with justice, and the sooner it was rectified the better.

Mr. JOS. LEE said that the law of primogeniture was bad, and, therefore, unjust, and ought to be done away with. It was very unfair when a man died without a will that all his property should go to his eldest son. It would also be very beneficial if they could get the same Act passed for England and Scotland as was passed in regard to the encumbered estates in Ireland. There were a great many estates in this country and in Scotland very much hampered, having annuities to pay out of them and so much borrowed capital, and until there was a chance of making these estates free there was not much chance of getting them improved. On many estates land only realised 3 per cent., and very likely these people had money borrowed for which they were paying 4 or 4½ per cent. Then as to the question between tenant and landlord, a prudent tenant was always prevented from building anything permanent upon his landlord's property. Suppose he wanted to build a cottage for a faithful servant to prevent him travelling miles to his work, immediately the cottage was built it belonged to the landlord.

The CHAIRMAN: The landlord ought to build it.

Mr. LEE knew different landlords who said that they were too poor and could not afford to do it, and their agents stated that when the interest on borrowed money and annuities was paid out of the income of the estate there was hardly anything to live upon. They might perhaps build one of wood and be able to remove it. Certainly it would be a privilege to build one in bricks and be able to take the bricks away on leaving the farm, but perhaps Parliament might devise something better than that. Tenants ought to have sufficient compensation for unexhausted improvements, but before anything was paid for these all dilapidations should be valued, and he would have these deducted off the value of the unexhausted improvements before he gave anything to the tenant, because so far as he had seen in this country there were as many bad farmers as bad landlords.

Mr. ROBB said if the question had been one respecting the management of farms which they were discussing he would not have made any observations upon it, as he had no practical knowledge of it, but he was so much interested in the question itself and in the discussion which took place at the previous meeting he could not resist the temptation of speaking upon it, especially upon one of the leading topics of Mr. Bell's paper. He congratulated Mr. Bell upon the excellence of that paper, both in its thought and mode of expression, and he also congratulated the Chairman for his lucid address upon the subject as seen from his point of view. He wished to keep the attention of the club upon the leading principle of Mr. Bell's paper—the Tenant-Right and compensation to tenants for past improvements. This was purely commercial, and as such a tradesman could understand it as well as either a tenant farmer or a landlord. Take Mr. Trotter's illustration: a tenant took a farm at £100 a-year. That was the value of it at the time he entered upon his lease—suppose for 21 years—and at the end of the lease the farm was worth £150 a-year. £50 a-year capitalised in the way Mr. Trotter put it was £1,000, and Mr. Trotter was for giving it altogether to the tenant. He dissented from that—

Mr. TROTTER: £50 put into the value of property at 30 years purchase represented £1,500.

Mr. ROBB: Take it at £1,500 if you will, and—

Mr. TROTTER: The landlord gets £500 of it.

Mr. ROBB said its mode of distribution was the present question. It would be unjust to give the whole of the amount to the tenant, and it would be equally unjust to allow the landlord to absorb all these improvements. Surely there might be a middle course; justice and right might be met in something like this way; let an estimate be made by properly appointed parties, perhaps it might be done by a court of arbitration, composed of people connected with the neighbourhood, who should say what the farmer had expended in improvements, and allowing for skill and general ability in making these improvements; and also apportioning to the landlord that uncertain but yet definite amount which his property might have risen in value with the times, and which could not be denied. A general improvement had taken place

over the country, represented all over the country as the improvement of the times, and that was a matter entirely beyond the interference of the tenant-farmer, and in some measure beyond that of the owner himself. Since he had his capital in the land he was entitled to some measure of the improvement in the general prosperity of the country; it would be difficult to estimate, but any such court as he had spoken of, composed of equal parts from each of the two classes, might come to a fair decision upon the matter. Take another illustration, a landlord spent £500 upon draining a farm, and charged 5 per cent., that is, £25 a-year. If that land was worth draining the increase in the produce would be worth more than the 5 per cent., it might be 10 or 15 per cent. if the land be as grateful as much of the land in this district had been after draining. Who was entitled to this increase? Doubtless it would fall to the tenant-farmer, but was not the landlord entitled in this case to more than his usual charge of 5 per cent.? There existed a good many incommensurable quantities, as mathematicians called them, in these matters, and caution and prudence had been shown in a high degree in Mr. Bell's paper. Mr. Trotter had bolder views on the subject. Regarding the tenure of land itself dangerous points had been touched upon, but he was glad to hear from the Chairman that he looked upon owners of property in the light of stewards, but how far their stewardship went, for how long it was given, and how they could interfere with it in any way or modify it, or finally abolish it, it was not for him to say. He quite agreed with the Chairman that much of the time of Parliament was spent in stupid abstract talk about impossible legislation, while many practical and local matters were compelled to lie over. Mr. Robb referred to the recent speeches of Sir C. Dilke and the Hon. Anson Herbert, and remarked that anything like Republican revolution or confiscation of property was not to be tolerated or thought of for a moment in this land in which justice and right had held sway for many ages, and he did not fear but that justice and right would continue to be the principle upon which Englishmen would continue to treat the property of one another.

Mr. CHRISTOPHER GREY thought that still the subject had not been half gone into, and moved that a committee be appointed to take the whole subject into consideration, so that steps might be taken to come to some practical conclusion. It was no use grumbling and finding fault with one another, for their prosperity was bound up in the united prosperity of landlord, tenant, and labourer, and he wished them to come to some conclusion having for its object their united welfare. He thought that the legislators of this country did not give a fair amount of attention to the agricultural interest. He liked the suggestion as to having courts of arbitration, and he thought they would be highly beneficial in matters of this kind. He did not see why they should not have something of the kind as well as other interests in this and other countries. The great nations of the earth—those which were most advanced in every respect—were trying to settle their differences by arbitration, and he thought that landlords, tenants, and labourers should try to do the same thing. He moved the appointment of a committee to discuss the whole subject, and to petition Parliament to pass laws to provide them with a proper means of settling all differences.

Mr. C. MARSHALL suggested that the discussion should be again adjourned, as the afternoon was far advanced, so as to give Mr. Bell an opportunity of replying.

The CHAIRMAN said it was a wide question, and it would be better if each subject was discussed separately, so that they could come to a resolution on each separate subject, but they could not come to any resolution to take in the whole of this question. However, if there were more members who wanted to speak upon this subject it would be better to adjourn the discussion to that day fortnight.

Mr. C. MARSHALL moved the adjournment of the discussion till the 16th inst., which was seconded by Mr. T. Dryden, and carried.

Mr. BELL said his sole object in bringing this subject before their notice, which he knew was a ticklish one, and would throw himself open to unfavourable remarks, was to bring the land question seriously before the attention of the Club, believing that Parliament would be obliged to legislate upon that question, and at no distant day, and he wished the agricultural interest to have its mind made up before that time, so as to be able to speak out distinctly and definitely and make known what they did want.

HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

At the January monthly meeting of the directors there were present: Sir James Gardiner Baird of Saughton Hall, Bart.; Sir Thomas Buchan Hepburn of Smeaton, Bart.; Dr. Balfour, Mr. Binnie, Seton Mains: Mr. Graham Binny, W.S., Mr. Leslie Melville Cartwright, Melville House; Mr. Hew Crichton, S.S.C., Mr. Curror, The Lee; Mr. Dudgeon of Cargen, Mr. Ford, Hardengreen; Mr. Hog, of Newliston; Mr. Lawson, of Bothwick Hall; Mr. Kenneth Mackenzie, C.A.; Mr. Mitchell, Alloa; Mr. Murray, of Dollerie; Mr. Mylne, Niddry Mains; Mr. Scott Skirving, Camptoun; Captain Tod, of Howden, Mr. Trotter, Champdeuric; Mr. Young, of Cleish—Mr. Mylne in the chair.

The following letter from the Veterinary Department of the Privy Council Office was read:—

Princes-street, Westminster, 21st December, 1871.

Sir,—I have submitted to the Lords of the Council your letter of the 8th instant, transmitting excerpt from the minutes of a special committee of the Highland and Agricultural Society of Scotland on the transit of animals. Referring to the minutes above alluded to, I am directed to state that any specific case of evasion of the provisions of the Transit of Animals Order of May 1870, if reported to this office, will receive the attention of the Privy Council. With reference to the first provision proposed by the committee, I have to inform you that no means which the Privy Council would feel justified in enforcing have been suggested to their Lordships for the supply of water to animals during transit. On this point I beg to draw your attention to the enclosed copy of the report of the Transit of Animals Committee. I am directed to state that the suggestion of the committee as regards covered waggons, and as regards food being provided, shall be taken into consideration by their Lordships. I have the honour to inform you that of the 44 stations suggested by your society to be included in the schedule to the Transit of Animals (Water) Order of March 1871, it is already proposed to include 25 in the next order of Council relating thereto. Of the remaining 19, at 13 stations the traffic is so small as not to call for the expenditure necessary to supply them with water. We are in communication with the authorities of three on the subject of water supply; and it has been reported to this office that the supply of water to the remaining three would involve a very large outlay. I have the honour to be, Sir, your obedient servant,

ALEXANDER WILLIAMS, Sec.

The Secretary of the Highland and Agricultural Society of Scotland.

The letter and relative report were referred by the board to the Special Committee on the Transit of Animals.

The following are the noblemen and gentlemen who will be proposed by the directors for election at the general meeting of the society on the 17th current, to fill the vacancies in the list of office-bearers:—Vice-Presidents: The Most Noble the Marquis of Lothian and the Right Hon. Lord Dunglass. Extraordinary Directors: Sir Hugh Innes Campbell of Marchmont, Bart.; Sir George H. Scott Douglas of Springwood Park, Bart.; Sir G. Graham Montgomery of Stanhope, Bart., M.P.; Allan Elliott Lockhart of Borthwickbrae; David Robertson of Ladykirk, M.P. Ordinary Directors: Sir David Baird of Newbyth, Bart.; Sir Henry J. Seton Stewart of Allanton, Bart.; William Aitchison, Linhope, Hawick; George Harvey, Whittingham Mains, Prestonkirk; David Milne Home of Wedderburn, George Auldjo Jamieson, C.A.; John Munro, Fairnington, Kelso.

Mr. KENNETH MACKENZIE, C.A., the society's auditor, submitted abstracts from the accounts for the year 1870-71, which were signed, in terms of the bye-laws, by two members of the Finance Committee and by the auditor.

The business for the general meeting on the 17th of January was arranged as follows:—Office-bearers to be elected; election of members; accounts for 1870-71; accounts

of the Argyll Naval Fund for 1870-71; thanks to be voted to Local Committee, &c., Perth Show, 1871; arrangements for Kelso Show, 1872; requisition from Stirling district for show in 1873; district shows, 1871, and grants for 1872; cottage competitions, 1871, and grants for 1872; chemical department; veterinary department; premiums awarded in 1871 and offered in 1872 for essays and reports; forestry department; contents of No. 7 Transactions, and report by Committee on Publications.

The list of candidates for election at the general meeting was submitted.

The Secretary reported having attended meetings of members at Kelso on the 15th, and at Stirling on the 22d, when the premium list for Kelso and classes of stock for the proposed show at Stirling in 1873 had been approved, subject to a few alterations.

A letter was read from Mr. Hugh Fraser, Balloch of Cal-loden, Secretary of the Inverness Farmers' Society, expressing the desire of the Committee of Management of his society that the Highland Society's show be held at Inverness in 1874. The board instructed the Secretary to inform Mr. Fraser that, should the counties connected with the Inverness district request the directors to hold the show at Inverness in 1874, the directors will be prepared to recommend the same to the general meeting at the proper time.

Various awards were made on reports by the different committees appointed to read and consider the papers lodged since the general meeting in June. The names of the authors of the successful reports will be announced at the general meeting. Mr. Menzies was authorised to state that, on application to him, silver medals will be awarded to the authors of the papers with the following mottoes should they feel inclined to accept of them, namely:—On the stem and branch pruning of conifers—Motto, Non amputatum. On planting and rearing of shrubs, &c., in plantations for ornament or as under cover for game—Motto, Do the likeliest, and hope the best. On the soils suited for the different kinds of forest trees as indicated by the plants that grow naturally upon them—Motto, Pro Grege.

The following report on Fiske's apparatus for steam cultivation by Professor Macquorn Rankine, LL.D., C.E., F.R.S.S., L. and E., consulting engineer to the Society, was read:—

I was present at the trial of the above-mentioned apparatus at Yester Mains on the 11th November, 1871; and I have to report as follows: The chief peculiarity of the apparatus is the transmission of power from the engine to the windlasses by means of a comparatively light endless driving rope, driven at a speed that is high in comparison with the speed at which the plough is dragged. I approve of this mode of transmitting motive-power, as being conducive to lightness and to economy both in first cost and in working; and such have been found by experience to be the results of applying a similar principle to the transmission of power for driving manufacturing machinery. The mechanism is well contrived for the purpose; it is easily and expeditiously managed; and it worked in a most satisfactory and efficient way during my inspection. The only defect which I could observe was a tendency to heat at the bearings of the windlass pulleys, and of the corner pulleys; and I consider that this defect might be removed by improving the construction of these bearings so as to distribute the pressure more uniformly, and over a greater surface. I cannot make any report as to the actual economy of power in the apparatus; for I was obliged by an engagement at a distance to leave the ground before any dynamometrical experiments could be made.

Report was remitted to the Committee on Steam Cultivation.

A letter was read from Mr. Peter Cameron, of 5, Brown Square, Edinburgh, sending a pattern shoe the Glasgow smiths are making for their horses in frost.

The general meeting was held in the Society's Hall, George IV. Bridge, Edinburgh, Sir James Gardiner Baird, Bart., in the chair.

The CHAIRMAN said the first thing he had to do was to propose that Her Majesty the Queen be elected a member of this Society. They were all aware how warm an interest his late Royal Highness Prince Albert took in agricultural societies, and how successful he was at the competitions of these societies with stock raised on the royal farms at Windsor. Her Majesty had kept up that home farm, and took a warm interest in the success of agriculture, knowing how much the success of this empire depended upon its agricultural prosperity.

Mr. GEORGE HOPE, Fentonbarns, proposed that Her Majesty should be made an honorary member.

The CHAIRMAN said that it was the request of Her Majesty that she should be made a member of the Society, and not an honorary member.

The Chairman's motion was then agreed to.

Sir WILLIAM MAXWELL-STIRLING moved the adoption of the appended address to Her Majesty. He thought it was quite unnecessary to enlarge upon the feelings which were to be found in this address. He was sure not only the gentlemen present, but all the members of the Highland and Agricultural Society would cordially concur in every word of the address:

To Her Most Gracious Majesty the Queen. Most Gracious Sovereign,—We, your Majesty's most dutiful and loyal subjects, the Highland and Agricultural Society of Scotland, incorporated by Royal Charter, assembled in general meeting, beg leave humbly to approach your Majesty, and to express deep and heartfelt sympathy in the great sorrow and anxiety into which your Majesty, the Princess of Wales, and the rest of the Royal Family, were plunged by the alarming and dangerous illness of your beloved son His Royal Highness the Prince of Wales. We also beg to offer your Majesty our warmest congratulations on the favourable change that has taken place in the health of His Royal Highness, and the decided progress that he has made towards a complete recovery. Our desire and prayer is that your Majesty may be comforted amidst these trials and afflictions, and be sustained and strengthened in all duties; and that His Royal Highness the Prince of Wales may be completely restored to health, and that his life may be spared to be a great blessing to your Majesty, to himself, and to the nation. Sealed with the corporate seal, and signed at the desire and in presence of a general meeting of the Society by Sir James Gardiner Baird, Bart., chairman, in the absence of the Most Noble the Marquis of Tweeddale, K.T., President of the Society. Society's Hall, Edinburgh, 17th January, 1872.

Sir WILLIAM GIBSON-CRAIG moved the adoption of an address to the Princess of Wales. He felt it was quite unnecessary to say anything to gain the concurrence of the meeting to every word which it contained. Whatever the distress of Her Majesty had been during the illness of the Prince of Wales, the distress must have been quite as intense in the case of Her Royal Highness the Princess of Wales:

To Her Royal Highness the Princess of Wales. May it please your Royal Highness,—The Highland and Agricultural Society of Scotland, incorporated by Royal Charter, in general meeting assembled, humbly offers to your Royal Highness its sincere sympathy on the recent illness of your illustrious Consort His Royal Highness the Prince of Wales. At the same time the Society takes this occasion to express its congratulations on the recovery of His Royal Highness, and its sincere hope for his continued health. The earnest prayer of the Society is that he may be long spared to be a blessing to your Royal Highness, his family, and the nation. Sealed with the corporate seal, and signed at the desire and in presence of a general meeting of the Society by Sir James Gardiner Baird, chairman, in the absence of the Most Noble the Marquis of Tweeddale, K.T., President of the Society. Society's Hall, Edinburgh, 17th January, 1872.

The meeting unanimously adopted the addresses, and the Secretary was authorised to forward them to the President of the Society, the Marquis of Tweeddale, for transmission to Her Majesty and the Princess of Wales respectively.

Sir WILLIAM GIBSON-CRAIG submitted the accounts of the Society for the past year, from which it appeared that the income from all sources amounted to £7,600, and after deducting

expenditure there remained in the Royal Bank a balance of £457 ls. 4d. The accounts were approved of.

Admiral Sir WILLIAM JOHNSTON read the account of the Argyll Naval Fund, from which it appeared that the sum of charge was £5,698 14s. 3d., and the discharge £5,498; the balance in bank at the 30th November, 1871, being £298 14s. 3d.

Mr. GILLON, of Wallhouse, said that, from the accounts submitted, it would be seen that the General Show at Perth in July last was not only able to clear itself, but to leave a probable surplus of about £99.

The thanks of the Society were given to the Lord Provost, Magistrates, and Town Council of Perth; to the Commissioners of Supply for the counties of Perth, Forfar, Fife, and Kinross; and to others who had given their aid to the Perth meeting.

Mr. GILLON reported that the arrangements for the general show at Kelso were in a highly satisfactory state. The show has been fixed to take place on the 31st July and 1st and 2nd August.

Mr. GILLON also reported that the directors had agreed to requisitions forwarded to them from the counties of Stirling, Dumfries, and Clackmannan, and the western division of Perthshire, that the Show for 1873 should be held at Stirling.

Mr. CAMPBELL SWINTON reported that during the past year the Society's premiums and medals had been in operation in 276 different localities. The money premiums awarded amount to £319 10s., besides 2 medium gold, 9 silver, 185 medium silver, 53 minor silver, and 176 plough medals. For 1872 the directors suggest for the approval of this meeting the following grants: Six districts for cattle premiums, at the same rate as last year—viz., £17 and 4 silver medals each, besides a special grant of £5 to the Shetland Society; three districts for stallion premiums at £25, three for mares at £7 and a silver medal each, and one for entire colts and fillies at £16 and 4 silver medals; seven districts for sheep at £16 and 5 silver medals each. The premiums for cattle and sheep are given to each district for three alternate years, and, in the intermediate years, the Society gives 4 silver medals for cattle and 5 for sheep. The premiums for horses extend over six successive years, commencing with the stallion premiums for two years, followed by the premiums for mares for other two years, and ending with the colt and filly premiums for a similar period. One district for swine at £7 and 3 silver medals; two districts for dairy produce at £16 and 4 silver medals; and in place of the 4 medium gold and 6 silver medals formerly competed for at the Kilmarnock Cheese Show, the directors this year recommend that a sum of £20 should be placed at the disposal of the Ayrshire Association. Seventy-five districts, for 250 medium silver medals, for green crops, best managed farms, best male and female animals, poultry, seeds, &c.; the plough medal under the usual conditions; and £50 and a medium gold medal to the Edinburgh Christmas Club.

The report was adopted.

Mr. H. M. INGLIS reported that in 1871 the Society's money premiums and medals had been offered in 41 districts, that competitions had taken place in 26, when £27 and 62 medals were awarded; and that the directors suggest the following grants for 1872—viz., 23 districts for cottages and gardens at £3 and 4 silver medals each; 21 districts where the money premiums are given by the proprietors for 42 medals—two to each district; the gold medal to the proprietor in Scotland who shall report the improvement of the greatest number of cottages in 1869, 1870, and 1871; the gold medal to the proprietor in Scotland who shall report the erection of the greatest number of approved cottages in 1868, 1869, 1870, and 1871. The rules of competition for the several prizes are contained in the general list of premiums for the current year.

Hon. GEORGE WALDEGRAVE LESLIE said the Land Improvement Commissioners in London insisted upon the arrangements in cottages in Scotland that were unsuited to the climate, and he hoped the directors would take some strong steps in assisting landowners who tried to get their lands improved.

The report was adopted.

Dr. ANDERSON reported on the state of the chemical department, which during the past year had presented the usual features. The work, which during the first half of the year had been above the average, had been somewhat smaller during

the latter half, though on the whole it had been considerable, for during the whole year 330 analyses had been made for members of the Society, embracing nearly every kind of manure, many feeding stuffs, soils, waters, and a variety of materials of interest to the farmer; some of these had been of great excellence, but too many were of inferior quality or adulterated. During the past half year a variety of matters of interest and importance in relation to the management of the laboratory had been under consideration, and especially a proposal which had been made that he should publish the names of dealers in inferior or adulterated manures. After very careful consideration on the part both of the Chemical Committee and the directors it was resolved that when cases of flagrant adulteration occurred they should be reported by him to the directors, who should, if they saw fit, authorise the publication of the names of the parties concerned. He himself should have preferred a more direct course, so as to avoid the delay which, in some cases, may occur from this arrangement; but the Board, acting under the best advice, thought it was the safest course, and he trusted that it would meet the approval of members, for he was satisfied that it ought to work well for the protection of the farmer. He had already reported one case to the directors which he thought worthy of notice, and hoped he should receive permission to publish the details. Another case had recently occurred of a manure of very inferior quality, which he thought should be made public, but which illustrated a difficulty he feared must sometimes be encountered. On completing the analysis, he wrote to the member who sent the sample, asking for the guaranteed analysis and name of the seller, but his application had been without effect, for he was without an answer to his letter, though he still hoped he might receive the required information, which should be at once referred to the directors. Several other interesting cases had also occurred, the publication of which seemed to him to be undesirable, though he thought attention should be called to one of them as indicating the amount of caution required by all persons engaged in the purchase and sale of such articles. He received some time since a sample of oil-cake from a dealer of the very highest respectability, with a statement that an analysis was required for the satisfaction of their customers, but that they believed it quite unnecessary, for the cargo came from merchants of the highest character, altogether above suspicion, and in whom they had the most perfect confidence. On examination it proved to be highly adulterated, more than half of it being French mts. Another sample sent by the same dealer was likewise found to be adulterated, but not to so large an extent. Of course, these cakes were no longer offered for sale, and I am sure the Society will agree with me in thinking that the name of the dealers should not be made public, as the circumstances must be considered as, on the whole, creditable to them. They show, however, how great is the caution that must be exercised even under the most favourable conditions. During the past half year some progress has been made in investigating the subject of scab in potatoes, to which reference had been made at a previous meeting, but, as he had then anticipated, it was necessary to continue the investigations on the produce of the past season, as the data from the crop of the previous year was not sufficient. Scab had not been abundant last season, but he was promised material for prosecuting the investigation, which, however, had not yet reached him. During the past year also, the field experiments, extending over a complete rotation, had been completed, and, he trusted, would be ready for publication in the forthcoming number of the "Transactions." These results, though interesting, are not all that could be desired, for they had been peculiarly unfortunate in weather, the seasons having been singularly unsuited to bringing out the effects of artificial manures. For some time back the Chemical Committee had been actively engaged in devising a scheme for conducting field experiments on a better system than that hitherto in use in this country, and more in accordance with the present state of scientific agriculture, and they were most anxious to obtain the consent of the Society to the establishment of an experimental station somewhat on the principles of those which had been in existence for some years in Germany. Mr. Goodlet of Bolshan, who is much interested in this matter, had taken it up with great energy, and he and Dr. Anderson had been engaged in a long correspondence in endeavouring to get all the necessary information. They had now got a

great deal, part of which had been laid before the Chemical Committee, and they expected soon to have a definite plan ready, which they trusted would meet with approval. They were, however, most anxious that abundant time should be taken for consideration, so as to make it as complete as possible, and avoid future difficulties. They were fully satisfied that it must be taken up in a purely scientific spirit, and that unless this is closed, the movement must prove abortive, and their only fear is, that they may not receive full support in this respect. Farmers in this country are very different from those in Germany, where scientific education has made a progress altogether unknown here, and our farmers prefer what are called "practical experiments," and are slow to appreciate the advantages to be derived from the establishment of the principles of agriculture, which are still most imperfectly understood, and to which the attention of the German experimental stations is mainly directed. It would be unnecessary, and indeed premature, to enter into any further details here; but he ventured to hope that it would obtain the cordial support of practical farmers. He had no doubt that it would be supported by those who took the trouble to examine the subject. He only regretted that we have not in this country a body of farmers familiar with science, such as is to be found in Germany, fully capable of appreciating the value of inquiries, some of which must be unintelligible and probably appear unimportant to those who are unacquainted with science. It was impossible to predict immediate results from such a station as it was proposed to found; but if the members will only have patience to wait and give science time and far play, he had no doubt the results would prove satisfactory and highly beneficial to practical agriculture.

A vote of thanks was passed to the directors for the trouble they had taken in the chemical department.

Captain TOP, of Howden, reported in regard to the Veterinary Department the appointment of Mr. Thomas Walley, member of the Royal College of Veterinary Surgeons, in the place of the late Professor Duns.

Mr. WALKER, of Bowland, reported that the following premiums had been awarded for Reports lodged in November, 1871:

£30 to Mr. Robert Scot Skirving, Campdown, Drem, for a Report on the Agriculture of East Lothian.
 Gold medals or £10 to each—to Geo. Armatage, M.R.C.V.S., The Bank, Hertford, for a Report on Abortion and Premature Labour in Cows, Mares, and Ewes; Hugh Borthwick, Old Caberstone, Innerleithen, for a Report on Lambing and the Diseases incident thereto; Duncairn Clerk, writer, Oban, for a Historical Account of Farming Covenants in Scotland; the Rev. John Gillespie, A.M., Mouswald Manse, Dumfries, for a Report on the same subject.
 Medium gold medals or £5 each—to Laurence Anderson, Northfield Cottage, Liberton, for a Report on the Agriculture of Peebleshire; Robert Laidlaw, Summerhopeburn, Selkirk, for a Report on the Natural History of the Sheep Tick.

Mr. WALKER also announced the premiums for competition in 1872.

Mr. IRVINE, of Drum, reported that at a late meeting of the board it had been renitted to the Committee on Publications to consider and report on the probable expense, and also on the expediency of publishing the Transactions in volumes, in place of numbers annually. The committee had accordingly taken the subject into their careful consideration, and reported in favour of the proposed change. The directors approved of the suggestions contained in the report by the committee, and the Transactions for February, 1872, will appear as a complete volume.

The SECRETARY laid on the table a report by Mr. Swinton, of a trial of steam cultivators, which took place on the 11th November, at Easton Mains, already published. He also submitted a report by Professor Rankine, on the trial of the Fiskin steam cultivating tackle, also published.

Mr. IRVINE, of Drum, reported with reference to the appointment of a committee to consider and report on the system of engaging farm servants, that queries on the subject had been circulated among some of the leading farmers in each county in Scotland. These queries were now in course of being returned, and a meeting of committee will soon be called to consider the answers received.

THE TENANT-RIGHT PRINCIPLE.

So great, and so far so general, has been the feeling of disappointment on the appearance of Lord Leicester's lease that many will be tempted again to dispute the dogmatic assertion as to any such indispensable condition of tenure. The Norfolk farmers are perhaps more particularly prone to uphold the long lease, but surely any committee of agriculturists must have been terribly over-riden before they passed such clauses as now stand embodied in the Holkham model. For our own part we have steadily declined to admit the infallibility here assumed, as we question very much whether a two-years' agreement framed on a fair TENANT-RIGHT principle will not be found as a rule to work better than any holding of ten times the duration, even if backed by quasi-liberty of action, full power to deal with the produce, and so forth. And the country, moreover, would seem to be fast coming to the same opinion, as everywhere we see the question gathering as it goes. In fact, with a lease or without a lease, there must be compensation clauses, and a man whose main provision is that towards the close he shall have so much time to run the farm out again to its original condition, is simply putting the clock back. The Holkham lease is curiously silent as to any plan of securing the occupier and keeping up the cultivation of the land, and one can scarcely understand how a committee, comprising owner agent and tenants, should have been so strangely oblivious of so essential an enactment.

This omission is the more remarkable as it is day by day becoming clearer that the relations between landlord and tenant cannot be put on too business-like a footing. At a dinner at Shrewsbury, it was stated that "a manufacturer who has a twenty-one years' lease, within two of its expiry seeks a renewal, if he arranges well; if not, he has to pay for dilapidations, and I imagine these could be as well assessed in land as in buildings. But, after all, has not the British farmer the best tenure when he rents from one of the noble or ancient county families, who feel a pride in retaining their tenants? I would say, when you rent under these landlords be content, and do your best; but if you rent under a cotton lord, then have a lease, as the same talent which realized the land would seek for the largest possible profit from the investment." There was a time, no doubt, when such outrageous nonsense as this would have had its weight; but that day is gone, and no man now who knows anything of the land question would venture on such an argument as that if you hold under a cotton lord you must have a black-and-white agreement, but if you hold under a real lord you should be content with the county-family pride, kindly feeling, and all that sort of thing.

The speaker, however, was not one of the county families of Shropshire, not one of the tenant-farmers of Shropshire, not one of the land-stewards, but a gentleman who when he began to talk upon land premised that "this was a subject about which I dare say many of my hearers will think I know but little," an opinion in which we should thoroughly agree with them; while he added that he "had never invested in land and never rented land," facts which we should certainly have assumed from the tone of his address. This honourable gentleman was Mr. Figgins, who spoke we believe as one of the members for the borough of Shrewsbury, and who of course was corrected forthwith by one of the leading agriculturists of the county. Mr. Bowen Jones said:

"The sound of Tenant-Right is alarming to many minds, and amongst them—judging from what I can catch from the remarks of the hon. member for Shrewsbury, with whose views I generally agree—of his also, simply from non-consideration. I am in a position to appreciate, as much as any man, the value of the sentiments he expresses with regard to the feeling that should exist between landlord and tenant; but I cannot conceive why Tenant-Right should interfere with this good understanding, for it means nothing more and nothing less than security for capital invested for which a tenant has not derived a return, and could be easily settled in the form of an agreement or by arbitration, *if generally recognised*, without the assistance of a measure in Parliament." And, again, "the dense population of this island demands food at a rate that we can't now anything like supply; but I believe that the resources of our soil, developed to its full capabilities, would at the present time almost fulfil the requirements; though I fear this will never happen without security being given for capital invested in the soil, the effect of which would be to increase the value of the land, and thereby prove to the advantage of the landowner; improve the position of the tenant, because he would be enabled to secure larger returns from the soil, and elevate the condition of the labourer, because the production of larger crops would require a greater amount of labour." When in London, or wherever Mr. Figgins employs his capital, we presume that he does so in a business-like manner; and if he desire to stand well with the Shropshire squires and farmers he cannot do better than advise them to secure themselves equally against absolute loss or unfavourable contingency, instead of giving utterance to clap-trap platitudes, which if people do not laugh at it is simply because they know better manners.

At the dinner of the Hexham Farmers' Club last month, after a paper giving a history of TENANT-RIGHT had been read, the Chairman of the Club, Mr. Grey, a man who has always shown himself to be very jealous of the Landlord's Right, and who has very slowly come round, said: "A lease of itself without Tenant-Right had a tendency to the 'up and down' system of farming—running down a farm at the end of a lease—which was natural. But he thought if a lease was combined with compensation there was no reason why good farming should not be carried on to the end of the lease. He admitted that it was a very difficult subject, but the difficulty was not insurmountable, and a scale might be established to give compensation under different circumstances." We would call the especial attention of the Holkham committee and of Lord Leicester's agent to these remarks, as Mr. Grey has the reputation, like his father before him, of being one of the most able stewards of lauded property in the three kingdoms. And yet generally good as was the tenour of this discussion, it was not kept altogether straight, the secretary of the Club, Mr. Trotter, doing his best to put the meeting wrong: "Mr. Wrightson had quoted many authorities on the question of Tenant-Right, but in no case did two of them agree, because they were fidgety and wrong: they played upon the fringe of the subject, as it were, and did not go to the principle of it. He held that as to the improvement made by the tenant in the farm, the increased value of it was the true measure of that improvement. He was not in favour of the tenant getting the full value of that improvement, but only a fair

and judicious part of it." Well, who in the world is or ever was in favour of the tenant getting the *full* value of his improvement? If this be something more than playing on the fringe of the subject, there is scarcely a word of worth Mr. Trotter said but has been said over and over again, and upon which certainly many of the authorities quoted by Mr. Wrightson are thoroughly agreed. Five and twenty years since it was thus written: "Let the Act contain a definition of the principle, 'a right to claim compensation for unexhausted improvement;' and to this Mr. Pusey put his signature, so that at least two of these authorities were agreed; while the *unexhausted* and not the *whole* has ever been the main feature of the argument. As Mr. Bowen Jones said at Shrewsbury, "it means nothing more or nothing less than security for capital invested, for which the tenant has not derived a return." Still, Mr. Trotter talks as if he were the first discoverer, although he does not talk very clearly when he holds that "the increased value of the farm is the true measure of improvement." Of course if there be no improvement there can be no compensation; but improvements are of a more or less durable character, for which a man should be paid in proportion to the time he had been allowed to recoup himself. When he has been paid so far, the landlord would reap any additional advantage from the permanent improvement of the property, so that a tenant would not be recompensed precisely by what Mr. Trotter calls "the increased value of the farm"—a very false principle to go on, as the tendency of all good cultivation is the increased value of the land.

T E N A N T - R I G H T .

At the annual dinner of the Hexham Farmers' Club, Professor WRIGHTSON read the following paper:

Tenant-right had been too often discussed to allow of my coming before you armed with new arguments. Such is not my intention; neither, I venture to say, is it what you expect. The Government of this country, and, as more immediately affecting a meeting of farmers, the landlords of this country, are in a great measure ruled by public opinion, and it is as guiding public opinion that such meetings as the present are valuable. Would that the farmers of this country better understood the value of their individual and united opinions. How often are members of Parliament influenced in their views by contact with well-informed farmers? How often are game bills, local taxation bills, contagious (animals) acts, modified by the notions of agricultural associations such as this? I think it necessary to remind you of this fact, because the great mass of farmers are not yet roused to a sense of the importance of united effort. Unlike the members of other professions or callings, and in spite of the means now at their disposal for combined influence, they remain isolated, and refuse to take part in discussions which closely touch their interests. Hence we might conclude that no section of the community were better off—none clearer of Government or other grievances, which from time to time we hear muttered in private, in a way altogether futile were it not for the muttered complaints. The position of the tenant farmers no doubt has its bright side, but I venture to assert that it has sad drawbacks which not only affect the men who occupy it but the community at large. It is not my object to-day to open up all the difficulties which beset the farmer in developing his business to the utmost of his knowledge and means. We have to do with one of them only, which may be expressed as follows: An enterprising farmer may lay out hundreds or thousands of pounds in cleaning, fertilising, draining, or otherwise improving his land. Several years may elapse during which time the business has been carried on at a loss or very small profit, and yet the grateful land is ready to give back with interest the capital already incorporated with it. It is exactly at this point that the need of Tenant-right makes itself evident. The tenant

may die, leaving a wife and young children who most speedily quit. The landlord may be succeeded by a needy, greedy, or unprincipled person, who at once proceeds to raise rents or eject tenants; political difficulties, game disputes, and offences of various kinds may arise, any of which are sufficient, at a six months' notice, to sever the connection between landlord and tenant, and, except in certain favoured localities, the unfortunate tenant is robbed much in proportion as his occupation has been improved by his management. The position of the tenant farmer is the reverse of satisfactory in all this. It may be summed up in the word "insecure." We have heard much lately about the land question, the land monopoly, peasant proprietors, large and small farms, entail, primogeniture, and such like. Much might, doubtless, be improved, but I am far from viewing sweeping changes with favour. The English rural economy in which the land is owned by one class, farmed by a second, and actually tilled by a third, has resulted in the finest farming in the world. Whatever theoretical reasons may be urged against this old established system, for God's sake let us be careful how we change it for new fangled notions, which might not be found suitable to our national constitution. England is nearly all let to farmers, and cultivation is brought to the highest perfection upon large farms and upon large estates. The immense mass of food produced annually in this England is produced by tenants, and I maintain that whatever shackles the farmers of this country diminishes the food supply. £10 and £12 per acre, and even larger sums (Mr. Mechi says £15) may be profitably expended in ordinary farming business. This is equal to from one-third to one-fourth of the entire value of the land, and yet look at the legislative enactments for protecting the landlords, and contrast them with the hopeless legal incapacity of the tenant. "I recently read a paper," says Mr. Mechi, "before the Midland Counties Farmers' Club at Birmingham, where I met the most wealthy, intelligent, and enterprising farmers of an extensive district. In the discussion which followed it was painful for me to hear from every speaker that the want of security of tenure and valuation for improvements sat upon them like a heavy cloud." The same feeling prevails throughout the country, and demands our most serious attention. We have, indeed, come to this point. Knowledge and wealth have increased, new improvements have been invented, new means for increasing the fertility of the land have been discovered, stock has been improved, and yet the old relations between landlords and tenants are tenaciously preserved. I say it is impossible to apply the knowledge now possessed by farmers unless they are secured from loss by a lease, a comprehensive Tenant-right, or, better still, a combination of both. I have read almost everything that has been said upon this subject of Tenant-right within the last two or three years, and have been much struck with the unanimity of opinion which exists with regard to it. Landlords and tenants appear to be agreed as to the principle of compensation, and, while it is by no means uncommon to hear men of experience declaim against leases, it is rare to hear this other means of security condemned. Mr. James Howard, M.P., in closing a meeting of the Farmers' Club, London, in May, 1870, after a discussion on this subject, said, "I believe that nothing would tend more to the advancement of agriculture in this country than a well-considered Tenant-right." The Shropshire Chamber of Agriculture came to the conclusion in 1869, "that in the opinion of this meeting it is necessary for the encouragement of a better system in the cultivation of the land that some legislative enactment should be obtained, giving to the tenants compensation for unexhausted improvements in the case of buildings and drainage, the landlord's permission having been obtained." The "North of England Chamber" has appointed a committee to go thoroughly into the whole question of Tenant-right. The Monmouthshire Chamber has done the same. The Essex Chamber voted unanimously that "it is highly desirable that a simply defined law of Tenant-right should be compassed by the Legislature for securing to the tenant compensation for unexhausted improvements in his holding." The Thirsk branch of the North Riding Chamber of Agriculture have resolved "that this Chamber recognises in the advancement of agriculture, the necessity, in the interests of both owner and occupier, of a re-adjustment of covenants, affording a greater freedom to the tenant in cropping land, and such additional security by lease or compensation clauses as will secure to the tenant reimbursement for the outlay required,

and that it is essential for the further development of agriculture that ground game should be abolished." Two years ago the Staffordshire Chamber, led by Mr. Carington Smith, moved "that the recognition by the legislature of the principle of Tenant-right would promote the interests of landlord, tenant, and labourer, and also increase the prosperity of the nation at large." I have troubled you with these resolutions because it appears to me right that agricultural associations should strengthen each other's hands in this matter, and not allow the useful result of debates in sister societies to die away, but rather to echo and re-echo throughout the land until they meet with their proper answer. English Tenant-right is no newly raised question. Its history and true bearings were very well traced by Mr. Corbet in May, 1870, before the Farmers' Club, London. The first year in which that club held any regular series of discussion meetings was 1845, and in December of that year Mr. Shaw, of the Strand, introduced the subject of "Tenant-right as between Landlord and Tenant." In the succeeding month an adjourned discussion on the same subject followed. In January, 1847, Mr. Shaw took up the subject from the landlords' point of view, when the club went with him in declaring "that a well regulated system of Tenant-right would be beneficial to the landlords of this country." After this, Mr. Pusey brought in his bill for the improvement of agricultural Tenant-right in England and Wales. In the summer of the same year the Wenlock Farmers' Club offered a prize for the best essay "on the necessity of some legislative enactment to secure the tenant farmer the benefit of his improvements, &c.," this prize being taken by Mr. Corbet, second editor of the *Mark-Lane Express*. In 1848, a committee of the House of Commons was appointed to take evidence on, and inquire into, the agricultural customs of England and Wales in respect to Tenant-right, of which Mr. P. Pusey was chairman. The fate of this movement to legalise Tenant-right was thus sealed by the Commons' Committee—"That any attempt to make its general introduction compulsory would be met by great practical difficulties, and your committee rely for the general and successful adoption of the system on mutual arrangements between landlords and tenants." In 1851, Mr. Caird, as *Times'* commissioner, decided altogether against Tenant-right, and the question remained in a more or less quiescent condition for many years. It is, however, within the last twenty years that agriculture has made its most rapid advances, and if Tenant-right was desirable in 1847 much more is it so in 1872. An extraordinary activity or restlessness has crept into all classes, and in addition to increased knowledge we have an infinitely greater facility in communicating with each other both personally and as bodies corporate. The Irish Land Bill also made many people look to our own system of tenancies. Thus a Warwickshire farmer in April, 1870, wrote to an agricultural paper that "if it be just and needful to give the Irish tenant of four acres security for his outlay in improvement, why should not the English tenant of four hundred acres have the same?" And again, "if farmers were adequately represented in Parliament the six months' notice to quit, the confiscation of improvements, and the destruction of crops by landlords' game would soon become things of the past." Likewise, Mr. Nevill (himself a landlord) said last July to the Nottingham Chamber, "he could not see why, if the Irish tenantry were to be rendered secure from any casualty, the English tenantry should not have the same advantage." At an exceedingly influential meeting of the Staffordshire Chamber (December 13th, 1869), over which the Earl of Harrowby presided, his Lordship, in words which I can by no means agree with, pointed out the difference between the English and the Irish tenants, and said, "he (the Irish tenant) frequently laid out a great deal of money and then found that the law offered him no protection. A state of things so wholly devoid of common sense was unintelligible to an English farmer." Lord Lichfield, however, "utterly failed to see why any principle which might fairly be applied to Ireland should not be applied to England." It is certainly difficult to see why the capital of an English tenant should be insecure, unless it is to be found in the fact that he is quiet under his grievances, and not disposed to commit agrarian outrages. Having glanced at the history and present position of the question, we have next to consider what Tenant-right really is, to strip it of its ambiguities, and finally to see whether any practical basis of action can be fixed upon in order to accelerate its more general

adoption. Firstly, we must not confound English with Irish Tenant-right. The Irish tenant not only requires payment for improvements but for the "good-will" of giving up possession. Such a Tenant-right not only looks up the capital of a young tenant commencing business and diminishes the rental value of land, but it can hardly be supposed in any sense to develop agriculture. Neither must we use that ambiguous expression "Custom of the country" as quite tantamount to this right. Tenant-right might be, and to some extent has been, grafted upon the "customs" of various districts, but too often the customs do little more than protect the way-going tenant from loss upon any necessary labour he might have performed for the benefit of the incomer. I cannot, however, agree with Mr. Corbet in maintaining a strict and definite distinction between custom and Tenant-right. I rather view the customs as the existing machinery by which improved ideas as to Tenant-right are to be carried out. Neither do I think that we have reason to be altogether depressed with regard to the progress of Tenant-right. The principle, as we have already seen, has been granted by every leading agriculturist, namely, that the tenant's capital should be made secure upon his leaving his occupation. It is also desirable that a way-going tenant should have sufficient inducements to farm well up to the end of his tenancy. I would also urge that in advocating Tenant-right, which is essentially the payment by the landlord for improvements made by the tenant, we are bound to allow that, in case the farm can be shown to have been damaged during the occupancy, the tenant should be equally willing to reimburse the landlord for such damage. The exact state of Tenant-right throughout the country has been too little investigated. Lincolnshire Tenant-right is in every one's mouth, and it no doubt is the oldest and probably the most perfect system in existence in this country. This right is, however, incorporated in the customs of the country and can only be viewed as an extension of them in a direction according with modern improvements. With regard to other counties we have in some cases a liberal way-going crop with an allowance in addition. In Monmouth the outgoing tenant takes an away-going crop of wheat on one-third or one-fourth of the arable land, and has liberty to sell clover, hay, straw, and roots. Usually when a way-going crop is allowed it appears to stand in the place of other ordinary allowances. In Derbyshire there is a limited compensation; bones, lime, guano, rape dust, &c., are allowed for. The allowances for half-inch bones extends over six years on grass land when pastured; if mown, for three years; on some farms one-third or one-half of the cost of the oilcakes consumed during the last year is allowed. In Huntingdonshire, the allowance for lime in equal proportion over four years; one-third is allowed for linseed cake or other artificial food used the year before quitting. The outgoing tenant is allowed for carriage on materials for building, and on drainage tiles, and also five years in equal proportions for draining. In Kent, Surrey, and Sussex, the amount to be paid to out-going tenants has been complained of as excessive. In Leicestershire and Rutlandshire, in a Michaelmas entry, the in-comer pays for all acts of husbandry, bought manures and their carriage, and one year's rent and rates on the summer fallows. He has to take the root crop at consuming prices, the bought manures and carriage being also charged. On Lady-day entries the summer fallows are paid for as at Michaelmas. For drainage there is an allowance of four or six years according to circumstances. Linseed and cotton cake are allowed for at the rate of one quarter for the last two years, and the same allowance is made for lime, but without the cost of the carriage for the second year. In Nottinghamshire, on a Michaelmas entry, the incoming tenant pays on the dead or summer fallows for the acts of husbandry, the rent, rates and taxes, also the manure or lime applied and the labour of applying them. He also pays for the turnips at a consuming price, together with two-thirds of the cost price of the bones or other approved artificial manures. On the grass land he has to pay for one-third of the value of the cake consumed in the preceding summer, and for the hay and straw of the last summer at a consuming price. On the Lady-day takings the out-going tenant is allowed liberally for the wheat on fallows and for turnip fallows. He receives consuming price for hay and straw, also for manure made from produce of preceding summer and labour thereon; quarter the cost of the linseed cake consumed in the last two years, which payment, however, is not quite

to be classed as customary. Staffordshire, raw bones and lime are allowed for extending over three years. Draining is paid for, the allowance extending over seven years. The out-going tenant also has an away-going crop of wheat. In the North and East Ridings of Yorkshire the principle of compensation is spreading. In the West Riding custom varies considerably. In some instances the out-going tenant is even allowed on the turnip or summer fallow one year's rent and taxes, as well as for all manure purchased, the dressings of the fallows, and the manure, making a deduction for the green crops. On the "half tillage" land (seeds, bean and pea stubble) he is allowed half the rent and taxes, the dressings, half the manure, three-fourths for bones, and one-third for guano, less half the deduction for the last green crop. In other parts, purchased manures are paid for at full cost if no crop has been taken, but after a crop the out-goer receives half the value. The above information (from Mr. Cadle's able essay on the Farming Customs of England) shows us clearly that Tenant-right, or regard for tenant's capital invested, is extending. The very terms, oilcake, bones, drainage, are too recent in agriculture to allow of this being doubted, and such allowances have evidently become engrafted with the old system of custom. In other countries, unfortunately, no such reasonable allowances are made, but there is little doubt that the good example already quoted will spread, and the true value of what are somewhat ambiguously termed unexhausted improvements will become better understood. Before proceeding to speak upon the actual adjustment of the claims of an out-going tenant who is leaving his farm in a high state of artificial fertility, directly brought about by the investment of his own capital, I have a word to say upon the whole general question as it affects the country at large. The public have a right to demand that the country shall be well cultivated. Or whether they have a right or not it is not improbable that the question of the public or commonweal (commonwealth) in this particular may be mooted. No man, however, will develop the capabilities of the soil to the utmost (especially clay soils) unless he is made secure to an extent which Tenant-right can scarcely reach to. It is only the purchaser, the owner, who can reap the advantages of his agricultural improvements by the real increase in value of his estate, which may be realised by an opportune sale. Every one cannot be an owner of land, and a man of small capital is not to be advised to lock up money in a 3 per cent. investment. It is, however, only just to the public, as well as to the farmer, that tenant's capital should be secure, and security can only be obtained by giving the tenant a more permanent interest in the land. I need not, I think, argue in favour of a lease before the present company, because I believe most of the gentlemen present have made up their minds in favour of this mode of tenure. A lease, among other things, is accented of favouring an "up-and-down" system of farming. You improve for seven years, you keep up the fertility for seven years, and you take it out for seven years. This is, I cannot help thinking, both natural and commendable, but it is nevertheless unfortunate for the country, and may be remedied by the introduction of Tenant-right clauses into leases; and I believe this would knock the ground from under those who would make out a case against leases. These gentlemen object to leases, first, because under them there is this "up-and-down" system of farming; and, secondly, because the end of the lease gives an opportunity for raising the rent, which, in the case of a yearly tenancy, rarely occurs. Now, if you introduce a proper Tenant-right, the first of these objections clearly gives way, and I believe the second would also disappear, because if the farm were really improved by tenant's capital the Tenant-right should come into operation at the end of the lease as a set-off against any proposed rise of rent. There is only one other suggestion which I shall mention as apparently meeting the case; I refer to the proposal to do away with the six months' notice to quit altogether as far too short a period for a farmer to transfer his business. Substitute a two years' for the six months' notice and introduce a proper Tenant-right, and we should soon witness an immense improvement in the agriculture of the country. I do not mean to say that this is yet applicable to the condition of backward districts where the tenantry are too poor and ignorant to be trusted with greater powers than they at present enjoy, but I do think that the condition of the greater part of England justifies a greater liberty of action being given to the tenant farmers. There are other men be-

sides the Rev. E. Smythies, of the Central Farmers' Club, who are ready to tell us that expressions of general opinion are in this case of no use whatever, and that "what farming men want is to know exactly what the out-going tenant has to receive—what proportion of the whole." There is much truth in this, and yet it is of importance to be thoroughly agreed upon the principle before proceeding to elaborate a system. I am also confident that with our present knowledge and agricultural organisation there would be little difficulty in coming to a decision as to the money value of unexhausted manures, foods, and other more permanent improvements, such as drainage, claying, marling, building, &c. So far the attempt has been made without sufficient regard to chemical evidence, and I certainly would recommend that any committee for adjusting the claims of Tenant-right should not only represent the landlord and tenant interest, but also be a representation of scientific knowledge in the form of a good agricultural chemist, whose opinion would be valuable in fixing the relative value of manures and foods as fertilisers. In recommending this, the only real difficulty I see is the few men there are in this country who know anything at all of agricultural chemistry. No system of Tenant-right can be sound which is not based upon truth. The estimates must be based upon experience, upon direct experiment, and upon chemical evidence, and not upon the mere dictum of a land agent. Glancing at some actual and proposed schemes of compensation, there is sufficient evidence of confusion. Mr. Piper, before the Swindon Chamber (December, 1870), quoted from the scheme of an eminent land agent, in Devonshire, as follows: The tenant to receive compensation for unexhausted improvements according to the following rules. Rule 1.—Bone manure with turnips over 5 years; 1st year the tenant to be allowed 20s. in the £1; 2nd, 10s.; 3rd, 5s.; 4th, 3s.; and 5th, 2s. Rule 2.—Guano over 4 years: 1st year 20s. in the £1; second, 8s.; 3rd, 4s.; 4th, 2s. Rule 3.—Superphosphate of lime and other manure for turnips the same as Rule 2. Rule 5.—Corn, linseed or oilcake, fed in the last year of tenancy by fatting stock or sheep, to be repaid 20 per cent. Rule 6.—Purchased yard, pig, or any decomposed manure, 1st year 8s. in the 20; 2nd year 4s. Contrast this scale with that proposed by Mr. Bellamy to the North of England Chamber, in which two-thirds of the bones and guano are to be paid for after a green crop, and if a way-going crop is taken after such green crop, then one-third only of the expense. Dissolved bones only to be allowed for at the rate of one-sixth of their value after a green crop, and are supposed to be worth nothing after a corn crop has been taken. No mention is apparently made by Mr. Bellamy of purchased foods spent on the land. In Lincolnshire the whole of the bones are paid for after a turnip crop, and one-fourth of the oilcake bills for the last two years. Mr. Masfen, in his admirable paper on "A Farm Agreement" (London, 1869), said, "Mr. Cadle proposes compensation for artificial food and manure, and that on a liberal scale, and I think it will meet with many supporters; as far as the food is concerned, I will go with him, but I am not disposed to sanction his views as regards superphosphates—the last year but one for a manufactured manure. The last year, in my opinion, goes far enough." This last opinion is supported by the experiments of Mr. Lawes, of Rothamstead, but controverted by Dr. Voelcker. Far my own part, I have long doubted the efficacy of superphosphate manures as a means of really improving land except indirectly. Their effect is generally ended with the crop to which they were applied. At the same time, by increasing the yield of turnips and of straw, they eventually increase the "muck-heap," and that will be of more permanent advantage to the land than any expenditure on so-called "artificial." With regard to the value of food residues they, as being incorporated with and enriching the farmyard manure, are probably of greater permanent value than guano and superphosphates. The differences in the value of the manure produced by various feeding stuffs is, however, so great that no person is entitled, as in the rules above cited, to class corn and cake together. According to Mr. Lawes, the money value of manure made from one ton of decorticated cottonseed cake is £6 10s., or not much below the price of the cake itself; that from one ton of rape cake is worth £4 18s. 6d.; and that from one ton of linseed cake £4 12s. 6d. On the other hand, the manurial value of the residue of one ton of barley consumed is only £1 10s.; of wheat £1 13s.; of oats £1 15s.; and of malt £1 11s. 6d. The fixing of the payments

for manures and feeding stuffs is, then, the most difficult part of the problem before us, and it appears to me that Mr. Lawes' opinion should be carefully considered with reference to it. Mr. Lawes has done much towards proving that land may be kept in condition equally by artificial manures and by farmyard dung; but when he comes to consider the permanency of effect from the various classes of manures used, he arrives at the following conclusion: "That when active nitrogenous manures, such as Peruvian guano, ammonia salts, or nitrate of soda, are applied in only the moderate quantities usually employed in practical agriculture, the unexhausted residue left in the soil after the removal of a corn crop has but little effect on succeeding crops. That when rape cake, and other organic purchased manures, which yield up their fertilising elements comparatively slowly, are employed, the unexhausted residue left after the removal of the first crop, may yield an appreciable amount of increase throughout a rotation. That when farmyard dung is employed the effects may be apparent for a still longer period. That when mineral manures, such as phosphates, salts of potash, &c., are used, the effects of any unexhausted residue are too slow and gradual to admit of any determination of their value." Again, "It has been shown by references to direct results that some important constituents of manure either leave little or no unexhausted residue in the land, or leave it so combined within the soil, or so distributed throughout it that it produces little or no appreciable effect on succeeding crops. Some manures, on the other hand, have been shown to produce marked effects for several years after their application. It is obvious, therefore, that it would require a very complicated sliding scale to enable us to estimate the value of unexhausted manures, under the many varying conditions that would arise." It is considerations such as these which led Mr. Lawes to the following very practical expression of opinion: "It would, I think, be more satisfactory that all valuations should, if possible, relate only to what is above ground. Nor do I see any difficulty in doing full justice to the out-going tenant without taking into account the value of the unexhausted residue of the manures which have already yielded a crop." The three items upon which Mr. Lawes would rely as the basis of a valuation in favour of the out-going tenant are—the farmyard manure made during the last year of the occupancy; the manure from purchased food which has not grown a crop; and the straw of the corn crops of the last harvest." This conclusion of Mr. Lawes has been criticised (especially by Mr. Smith, of Woolston) as providing an insufficient remuneration for the out-going tenant. It is, however, capable of expansion, and appears to me to be based upon a sound principle, for after all the expenditure in various fertilisers is of less importance than the effect of such an expenditure. What better claim can a tenant have for compensation than by showing that he has raised the yield of the corn crops and the quantity of manure upon the farm? If this has been done by proper means, I cannot see how a simpler basis for calculation can be obtained than by the results of such good cultivation as above indicated. Here then is one means by which nearly all the tenant's land improvements may be compensated to him. It is not, however, perfect because it does not provide for the outlay of money upon drainage, liming, marling, claying, &c., which may have been done by the way-going tenant, and which still have a prospective value. These improvements must still be paid for on a sliding scale not difficult to construct. Improvements to houses and buildings, roads and fences, will readily be valued by experienced men, and thus a complete system of Tenant-right may be elaborated.

Mr. GREY, the President and Chairman of the dinner, congratulated the Club upon the successful paper that had been read to them by Professor Wrightson. It was the last of the year, and the winding up of a succession of papers, all of great interest, and many of them had excited a considerable amount of discussion in the Club, which discussions were of great interest not only to themselves but to the country, and they were much indebted to the local papers for reporting all these discussions so very fully. They had the credit in that Club of being a radical lot, and talking of many innovations. Professor Wrightson did not come there to represent the landlord's interest, and though he was certainly no Tory he had thrown into his paper a great amount of caution, if not Conservatism, and counselled the Club not to go in hastily. This led him to one of the principal topics of Pro-

essor Wrightson's paper, which was one that had been mentioned at this Club before. Farmers were very differently situated from manufacturers, from iron-masters, and from people who carried on commercial enterprises in towns and cities, because a farmer's business was one of great isolation. He met his brother farmers when he came to the market, and after doing a certain amount of business he went off home again. Farmers had not hitherto been in the habit of combining to carry out their desires as people in other trades had done. They had made a step in that direction by the Chamber of Agriculture and Farmers' Clubs. He had said before at this Club that if farmers had anything to complain of, instead of grumbling about it at the market, it was necessary for them to combine and press the subject upon the Legislature of the country. In these days of great pressure, Parliament took up those measures upon which they received the most pressure, and their representatives took up those subjects upon which their representatives gave them little or no rest. When an election came, he found generally that all topics of local interest, and all topics which affected the pockets of the farmers, were forgotten altogether, and the candidates at the election heard nothing of them. A candidate in this country was never confronted by a farmer who said to him, "You must oppose everything in Parliament till the local taxation question is brought forward." If he had an opportunity at an election, certainly he would tell the members of Parliament that their members were sent to look after the interests of their constituents, and until farmers combined and forced their views upon their members, and insisted upon what was called domestic legislation being put forward, it would be pushed aside to make room for more exciting subjects. They ought to combine to put out members who refused to represent their interests, and send men who would represent them, as one or two counties had done. It was only in this way that farmers would get their interests attended to. Then, as to Tenant-right, it would be a difficult matter to go into details as to compensation; but Professor Wrightson suggested a combination of lease and Tenant-right as better than either alone. A lease of itself without Tenant-right had a tendency to the "up and down" system of farming—running down a farm at the end of a lease—which was natural. But he thought if a lease was combined with compensation there was no reason why good farming should not be carried on to the end of the lease. He admitted that it was a very difficult subject, but the difficulty was not insurmountable, and a scale might be established to give compensation under different circumstances. He mentioned at one of their recent meetings that Mr. Pusey, the celebrated agriculturist, had in his day attempted something of this kind, but failed to carry it out. He did not despair of it being carried out some day, but unless farmers gave their minds to it, of course no one in Parliament would give their attention to it. The club had carried out these discussions in a spirit of friendliness and good feeling amongst themselves. He stood sometimes rather alone, and he had heard some gentlemen say the chairman naturally takes the landlord's side of the question. His interest as a tenant farmer was considerably greater than that as landowner, and as agent his personal feeling was in the happiness and prosperity of the tenants. As an honest man, however, he must do his duty, and see that the property of his landlords was not deteriorating. He always wished to take an impartial view, and he thought he generally succeeded in taking an impartial view of the case. The impression might be that he took the landlord's view of it because there were no landlords at their meetings; certainly the views he expressed at the meetings were made from a love of fairplay, and it might be from some little opposition, as he took an opposite view when he heard extreme views enunciated at the Club. He never liked to see a man hit hard behind his back; and if he took his part it might be from the spirit of English pugnacity. Amongst themselves these discussions did good, and he hoped they would do good all over the country, and these discussions throughout the country might tend to excite greater interest in agricultural questions, so that at some day they might arrive at a more satisfactory settlement of the arrangements between landlord and tenant. The great object was to carry on the cultivation of the land to secure the greatest quantity of produce from it that it was capable of growing, and the interest of the country at large in the land was to see that nothing was wasted, and that everything pro-

duced all that it possibly could. Would they establish a manufactory and let part of the machinery stand idle if they could get orders to keep it all at work—and when they had land should they only get half of what it would produce if they set properly about it? The question of draining had been brought before them, but it was seldom that tenants in this part of the country had to do any draining. It is generally done by the landlords, but it was capable of adjustment where it was done by the tenant. He had drained land as a tenant-farmer on a short lease, the expense of which was repaid him in a couple of years. He naturally after that cultivated the land in a different way, and it paid him for the improvement. He got the land worth 10s. an acre, and left it worth 30s. an acre. He got no compensation at the end of his lease, though he was far from saying that there should not be a scale established, and that he should have received compensation, but as it was he was perfectly satisfied. He could not, however, go in for the principle that the tenant ought to have the capitalised value of all the increase he had made in the value of the land. He took the land at 10s. an acre, and he left it worth 30s. an acre; but it paid him; he got his money back with good interest, and what right had he to get all the increase capitalised on that farm? The landlord might wish to drain the land of his own free will; but the tenant might go and put his money and get the increased value of the land. The landlord would then say to the tenant that he had it good land, and there was nothing more for him to do. He (the Chairman) did it without his landlord's leave; if the landlord had been consulted, and the law had been that he could claim the value of all the improvement, the landlord would probably have told him to leave it as it was, and that he would make the improvement himself. There were two sides of the question, and he said this in answer to those gentlemen who could see only one side.

Mr. G. H. RAMSAY would not flatter the farmers or landlords; he thought the latter neglected their interests most shamefully. The landlords, he thought, were very careless regarding their true interests; if some of them had been with them that day he thought it would have been better for them, so that they might have helped to ventilate important questions bearing upon the agricultural interest. As to the farmers they were good-tempered, jovial fellows; but when they wished to gather them together, to get subscriptions from them, and do things of that kind, he was sorry to say they were tremendously behind. He said these things because he was anxious to see them prosperous and thriving, and the time was not far off when, by education—education in such matters as Tenant-right—they would become a superior body of men altogether.

Mr. JOSEPH LEE had had an opportunity of being with Mr. Wrightson in Lincolnshire, where there was Tenant-right, so he met with the best farming there that he ever saw in any county in England. He had been through great part of England and Scotland, and he might say the value of sheep and corn might be increased thirty per cent. if the tenant had security for the capital invested in the land. Farming would never be brought to perfection, and the land put into the highest state of cultivation, until the time came when such security was given to the capital of tenants. Some thirty years ago it was difficult to find a man with much capital, but now there were hundreds of them, and they scarcely knew how to invest their capital, many of them joining joint stock companies, and probably another crash would come. How much of this money would go into farming operations if only security was given for their capital? Mercantile men were not like farmers, and would not invest unless they saw some chance of some security for their capital being returned. He thought that if anything could be done to follow up this paper of Mr. Wrightson's, if any method could be devised which would give the landlord a fair share of the value of the improvement made by the tenant, and also what the tenant should have, it would be a great boon to this country. A committee might be appointed to draw up a petition to Parliament on the subject. It would be a difficult thing to do; but if such a thing could be done, it might help forward this question. As Mr. Wrightson had remarked, if Tenant-right was a good thing for Ireland, why should it not be a good thing for England? He thought that many things might with justice be done which would be a great advantage to landlord and tenant.

Mr. MATTHEW SMITH said that what they wanted was a Tenant-right that would be liberal both to landlord and tenant.

They could not have such a Tenant-right as was established in many parts of the south of England. He knew a gentleman who farmed in the south, and who was now living in this neighbourhood, who left a farm of little more than 100 acres, and received £500 compensation. If such a Tenant-right was applied, what would be the consequence of it? Supposing the farm was 400 acres, and the Tenant-right £2,000, where would the tenant get £2,000 to pay for Tenant-right and commence farming? What they wanted were leases that would do away with hares and rabbits which were eating up the food of the country. He would give the tenant a liberal lease, and let him have power to dispose of a portion of his crop in the best way he could, as the tenant would be able to keep the farm up in condition by manures. What Tenant-right could they expect Parliament to adopt? They could not expect to get the Tenant-right they had in Ireland, which he considered one of the greatest evils that ever existed in any country. Look at the thousands of people that had lost their lives in that country through it. He held that the Tenant-right which would be beneficial to both landlord and tenant was the one they wanted.

Mr. W. TROTTER, the secretary, said that it was of no use discussing these subjects and wishing to have the laws altered, unless they took some steps to put their wishes into execution, but so far as the discussion had gone that day, his idea of Professor Wrightson's paper was that it tended to make confusion more confused. Mr. Wrightson had quoted many authorities on the question of Tenant-right, but on no case did two of them agree, because they were fidgetty and wrong—they played upon the fringe of the subject, as it were, and did not go to the principle of it. He held that as to the improvement made by the tenant in the farm, the increased value of it was the true measure of that improvement. He was not in favour of the tenant getting the full value of that improvement, but only a fair and judicious part of it. He would leave to the landlord that part which might represent to some extent, and closely approaching to it, that indefinable money value, which, at their previous meeting, Mr. Robb alluded to as illustrating the progress of the times. On that point a good deal of misapprehension existed, as he held the improvement in the value of farms, judging from the farms he had known from his earliest years, was owing to the improvement in their cultivation. There were farms not worth a penny more than they were twenty or thirty years ago, because they had remained in the same state; yet some farms in the Bywell parishes had increased 100 per cent. in value simply by the improvements made by their tenants, and not by the landlords. Many landlords when they came into possession of an estate expended large sums of money upon each of their farms, and they expected to get their money back again in increased rents; then, why object to pay compensation to the tenant who made improvements? He knew of work done by landlords themselves, and it was let at prices which no tenant farmer would give who knew anything of his business. That work could have been done much cheaper by the tenant, and the land made of much more value to the landlord. A feeling of justice ought to predominate with them; and he held that a tenant farmer, when improving his landlord's land, was fully entitled to the value of the improvement he made, or a fair share of it.

Mr. YOUNG said that Tenant-right was an important subject. No Tenant-right could be perfect without a lease, and compensation at the end of the lease. It was a subject which he had considered for some time, and he thought the simplest way was for a farm to be let for 15 or 20 years, and at the close of the lease the rent of the farm was not to be increased more than a tenth. If the farm had increased more than one-tenth, any increase above that ought to be valued by parties appointed by both sides, and the tenant should receive the extra amount for his improvements. As to unexhausted improvements, compensating a tenant according to the quantity of manure applied to the land in the last years of a lease might not always be satisfactory. A person who did not understand much about these manures, perhaps might just go and buy something and put it on the land, and get paid compensation for it, and make a good thing out of it in that way. If a farmer wanted to get all the benefit he could out of the land in the last year or two of his lease he applied lime or nitrate of soda freely to the land, and got out of it in that way. The simple way for a Tenant-right was, if the farm was im-

proved, for the tenant to receive the increase in the value of the farm, but let it be a little valued at a little above the present rent, and if the farm was deteriorated let it be valued, and the landlord be paid for such damage by the tenant.

Mr. H. T. THOMPSON wished to have some explanations on certain portions of Mr. Wrightson's paper, and he asked that gentleman why he put a higher value upon phosphates than nitrate of soda or things of that kind. On many soils nitrates grew an excellent crop on the first application, and they often heard it said that the vegetable matter left in the land went far to produce good crops. If nitrate produced a good crop, there must be a large quantity of vegetable matter left in the soil to decay and be food for succeeding crops. Then, again, a higher value was placed in the paper upon manures derived from cakes than that from meal. So far as he was able to speak, as a practical man, he had used cake a good deal, and the manure was greatly improved, but he knew several farmers who used meal. These farmers said that those who used cake allowed the manufacturer to pick their pockets, while they knew they were dealing with honest fellows when they were dealing with themselves. He would like Professor Wrightson to give them a little more information on that point, as he knew a good deal of scepticism existed amongst farmers in regard to it. As to Tenant-right, he was sceptical upon that matter, but he would not express his opinions upon that matter that day.

A vote of thanks to Professor Wrightson having been carried,

Professor WRIGHTSON, in acknowledging this, said he hardly expected to be called upon to make a reply, but since questions had been raised upon his paper he would do so. In reference to the view taken by the secretary, certainly he could wish that some simple method could be arranged, so that a share of the increased value might be taken by the tenant and a share by the landlord, but he was afraid that instead of being a simpler method it would be quite as difficult as taking the improvements in detail. Of course, many circumstances might arise to give land an increased value; they might have a town growing out in a certain direction, a railway going across it, and many incidental improvements, which had nothing to do with agriculture, but which increased the value of the property. When they came to share this improvement and capitalise it, the sums would be so large that either party would have to pay, that each party would be careful to shun any such agreement, binding them to pay a large sum. They had sometimes a reduction in rent as well as an increase, and probably the tenant of the farm on which the reduction took place was not in good circumstances, and if his deficiencies were to be capitalised it would be very difficult to recover it from him. These were the difficulties, but there also seemed to be unfairness in it as well. They must remember, in the case of the tenant's improvement of the farm, that that improvement laid latent in the farm. It was like a man making a hole down to coals; he made a hole down a seven-foot seam, but was he to claim the whole of the coal which laid there? It was much the same in the case of a tenant draining a farm, and opening up treasures which really existed, and which any landlord might have done. He thought the proposition of the secretary would make the landlords jealous of letting their farms at all, as they would think it would be too good a thing. He was not aware that he put a higher value upon phosphates than upon nitrates; and whatever might be said in the paper about the value of phosphates, these remarks were made in speaking of tenant-rights in various counties. The difference which existed in the tenant-rights in different counties showed them the immense amount of confusion in which the question was veiled, and that of itself ought to convey a valuable lesson to them, and make them wish for a simple form of tenant-right, and to do away with all these confused systems. With reference to phosphates, they acted very quickly upon the land, and so far as his definite experiments had gone he had not much reason to think that either superphosphates or nitrate of soda had much residual effect. It was true that they increased the crop, but they did not appear to have much residual effect. With reference to manures and feeding stuffs, he could not well speak of them together; they were so very different. He reminded them of what Mr. Lawes pointed out—that these active nitrogenous manures, which they called artificial manures, did not appear to have much effect in improving crops after the crop to which it had been particularly

applied. When they came to organic manures, there was a residue from cake and farmyard manure, so that, while they got an increase in the first crop, they probably got an increase in every crop for a greater length of time than even a rotation. Although they got good crops from artificial manures, as well as from organic manures, yet there was a difference in their value as respectively increasing the value of the land. He would make a difference between simply artificial manures, such as nitrogenous phosphates, and those of an organic nature, which kept yielding up products to plants for more than a year. He was asked why the manure from meal should have less effect than that from cake, but they must consider the nature of meals and of cake. In linseed-cake there was a good deal of husk, and the percentage of husk was very much increased by the very fact that the oil was pressed out of it. The husks of seeds, just as in the way of bran of corn, although not of such a nourishing character as wheat, contained a great deal of nitrogenous and mineral matter, while the oil which had been pressed out of it contained very little of nitrogenous and mineral matter. Meals contained a large amount of starchy materials, and although of its feeding qualities there could be no question, it did not make such good manures as cakes. In cakes there was a large amount of nitrogenous and mineral matters; in meals, made from unbroken and whole corn, there was a very large amount of starchy materials not of manurial, but of feeding value, and there was a less amount of what they might call actually fertilising materials. He had to apologise for the rather complicated nature of his paper, but when he wrote it he looked forward to the fact that it would be published in the papers, and probably looked at again and read and discussed. He had been at some pains to collect his information on the subject, and he had placed in his paper the comparison between Tenant-right in the various counties, and also opinions of good authorities, which, when placed in juxtaposition, could be the more readily compared.

THE FRENCH PEASANT FARMERS' SEED FUND.

The following correspondence has been forwarded us for publication:

To H. M. JENKINS, Esq., Secretary, Royal Agricultural Society of England.

Sudbury Hall, Derby, January 9, 1872.

Dear Mr. JENKINS,—Accompanying this you will receive the copy of a letter addressed to me by the French Foreign Minister. It is unnecessary to allude to it further than to say that if it has been a source of pride to me to have been associated in the performance of a philanthropic work for the benefit of a neighbouring country in its hour of bitterest distress, I shall never forget, that although circumstances placed me at the head of our work, it was the sagacity of my colleagues which brought about the result for which, apparently, I receive the honourable recognition of the French Government. The cordial manner in which my colleagues have always co-operated with me, is a guarantee that they will join in viewing this testimonial as a record of approval of our united efforts, and that they will be satisfied that it should rest in my keeping. Whenever we do separate we shall all look back to our intimate association with unmixed pleasure. Believe me, yours very faithfully,
VERNON.

To Lord VERNON, President of the Committee for the Distribution of Seeds to the French Farmers.

Versailles, November 30, 1871.

My LORD,—The work which the committee, under your presidency, undertook in coming to the aid of those among the farmers of France who were the victims of the war, by causing seeds to be distributed among them, was of such great value to France, that the President of the Republic can but feel desirous of offering you some mark of his gratitude. The President has desired me to present you with a vase of Sèvres porcelain. I lose no time in forwarding this souvenir to you, and I rejoice to be, in this matter, the interpreter of the Chief of the State, and to have this opportunity of expressing to you, my Lord, my personal sentiments of high regard.

REMUSAT, The Minister for Foreign Affairs.

THE WOOD PIGEON.

At a meeting of the East Lothian Agricultural Society, Mr. Harvey, Whittingham Mains, reported that since March last 13,000 wood pigeons had been killed in the county, and that the special fund for the promotion of their destruction amounted to £55. A tremendous number of these birds had visited Haddingtonshire this year, and it was very annoying to see the immense flocks of them completely destroying the fine fields of red clover. Lord Elcho, Lord Blyth, the Earl of Wemyss, Sir Hew Dalrymple, and other proprietors, had aided the Society in their crusade against these destructive birds, and he implored the remaining county gentlemen to follow such a good example. Landlords could not do a more gracious act towards their tenantry, who paid large rents for their farms, than to order their foresters to pull down the nests of the wood pigeons, and to create still greater havoc than at present among the winged pests.

Mr. DURIE (Barney Mains) said he was sure a great number of wood pigeons came to East Lothian from Berwickshire, and the proprietors in that county ought to be asked to join in the onslaught against the pigeons.

Sir HEW DALRYMPLE said he did not believe that wood pigeons bred in Haddingtonshire. A great many had been killed from year to year. He did not know whether it was complimentary to Mr. Harvey's persecution of them or not, but the number which visited the county this year was something marvellous. He had seen the other day a dell of red clover positively blue with them; they were as thick as they could stand together. It was a well-known fact that proprietors who shot these birds in the neighbouring county found them full of the grain, not which was growing there, but which had been grown thirty miles away.

Mr. FLETCHER (Salton) believed that the wood pigeons came from Norway.

The CHAIRMAN said he was sure every member of the Society felt how much they owed to Mr. Harvey for his endeavours to get rid of these blue pests which covered the fields. He sympathized with Mr. Harvey in his statement about the intolerable nuisance it was to farmers to see the fields destroyed by these birds. He did not believe that Haddingtonshire was responsible for their breeding. He knew that in Suffolk flocks of these and other birds came and went no one knew where; and really Mr. Harvey, to succeed in extirpating them, would require some sort of international wood pigeon league. There was no doubt that these birds came from foreign parts as well as from Berwickshire; but meantime they must continue their efforts to give them on their visits a warm reception.

Mr. ROUGHHEAD (Myreside) believed that one cause of the great increase of wood pigeons was the gun-tax. If they could get Mr. Lowe to take the tax away, plenty more wood pigeons would be destroyed.

The CHAIRMAN said he would not envy the members of any deputation sent by the Society to Mr. Lowe in regard to the gun-tax.

It is intimated that more funds for the destruction of the wood pigeon would be called for in March next.

A CHRISTMAS RIDDLE.

After the letter H.)

'Twas whispered down Westward, 'twas muttered at Ross,
And Aberdeen echoed its worth as a cross;
On the confines of earth 'tis permitted to rest,
As lands o'er the ocean its presence confessed.
'Twill be found in all spheres, from Booth or from Bares;
Is seen out at Sydney, and prized in the States.
It has given to man even its very last breath
To provide for his feasts, though the cost be its death.
To its breeder it brings wealth and honour and fame,
Is the prop of his house, and his very best game.
Without it the red-coat and white-face would roam;
But woe to the workman who drives it from home!
O'er Erin's green pastures its voice will be heard,
Nor yet from the Lowlands of Scotland be scared.
It has warmed up the hearts of the swells round the ring,
As Strafford or Thornton its praises may sing.
Oh! let it not seek foreign shades and herce suns,
But bid for it briskly, for now "the glass runs."

—The Gentleman's Animal.

THE FARMERS' CLUB.—The following subjects have been selected for discussion during the year 1872. February 5: The Use of Method, Arrangement, and Observation in the Management of a Farm; proposed by Rev. G. Davies, Hall Place, Romsey. March 4: The Transit of Live Stock; Mr. A. Welch, Southall. April 1: Vegetable and Fruit Farming; Mr. T. Scott, Knaphill, Woking. May 6: Principles affecting Cultivation, Manuring, and Cropping; Mr. J. J. Mechi, Tiptree, Kelvedon. November 4: Freedom in Cultivation and Security of Capital; Mr. T. Horley, jun., The Fosse, Leamington. December 9: Some Comparative Results of Large and Small Farm Systems in providing Food for the People; Mr. H. M. Jenkins, 12, Hanover-square, London, W.

THE WILLIAMS TESTIMONIAL.—This movement has now been fairly launched, the list already including a number of good names. Although the Committee of the Farmers' Club declined as a body to take any action, Mr. Cheffins the Chairman, Mr. Congreve, Mr. Leeds, Mr. Tretwey, and Mr. Spearing, all past Chairmen, with other members who happened to be at the last meeting, at once offered to aid the object.

TESTIMONIAL DINNER.—A number of his friends, invited Mr. Winterton, the well-known auctioneer and farmer of Alrewas Hays, to a public dinner in recognition of his success as an agriculturist, and for having established the Smitfield in the town of Lichfield. Lord Lichfield was in the chair. Mr. Winterton took the second prize of the Royal Agricultural Society last summer for farms.

PRESENTATION.—The workmen in the employ of Messrs. Ransomes, Sims, and Head, have presented to Mr. G. A. Biddell, C.E., as a mark of their respect, a silver inkstand, weighing 65 ounces, on which was the following inscription:—Presented to Mr. George Arthur Biddell, by the workmen employed at the Orwell Works, Ipswich, as an appreciative token of the good feeling which has existed uninterruptedly between him and them for 20 years, during which time he has eminently filled the position of manager.—January 1, 1872.

THE ESSEX AGRICULTURAL SOCIETY.—At the Annual Meeting at Chelmsford on Friday Mr. J. R. Vaizey was elected President for 1872.

THE FRAMLINGHAM SCHOOL.—The Rev. W. W. Bird, B.A., for some years second master of All Saints' School, Bloxham, has been elected to the head mastership of Albert College, Framlingham, Suffolk.

THE OXFORDSHIRE AGRICULTURAL SOCIETY.—The Banbury Agricultural Association having declined to continue the amalgamation for a stock show, it was decided at the general meeting that the Oxfordshire Society should revert to its old plan of holding its shows in various parts of the county, and the following resolution, moved by Mr. Mumford, and seconded by Mr. Garne, was carried: That this Society be open to receive applications, and contributions towards the expenses, from any towns in the county desirous that its show should be held there during the last week in May next. Applications to be sent to the Secretary, on or before March 1st.

THE DEVON COUNTY AGRICULTURAL ASSOCIATION.—At a meeting held at the Castle, Exeter, the Duke of Somerset in the chair, it was resolved, on the motion of the Earl of Devon, to establish a County Agricultural Association for Devonshire, which will hold annual exhibitions of stock and implements alternately in the northern and southern division of the county. It is intended that the Society shall work in harmony with the Royal and Bath and West of England Societies, and to that end a special resolution was passed, providing that when either of those societies holds its meeting in Devonshire the county meeting shall not be held, but the council shall have power to contribute to the prize fund of the larger association for the encouragement of local breeds.

A FRUIT FARM.—Mr. Varden has worked out the idea of a fruit farm on a vast scale, near Pershore. His estate is 250 acres. Of this about 140 acres are planted with fruit trees. These include 60,000 gooseberry bushes, 100,000 currant trees, and about 6,000 plum trees, to say nothing of pear, apple, and other trees. The extent of the farm may be imagined when we mention that for weeks during the fruit season Mr. Varden has sent off four or five tons of fruit a day. One lot of currants sent away one day to one customer weighed seven tons.—The Garden.

WARWICKSHIRE AGRICULTURAL SOCIETY.—At the adjourned annual meeting, Lord Leigh in the chair, it was decided to hold the next show at Warwick, it being understood that Birmingham was looking forward to a visit from the Society in the following year. As to the annual show being held alternately in the northern and southern divisions of the county, it was decided to abolish this restriction, so that in future the meeting may be held in any town within the county.

THE HAMPSHIRE CHAMBER OF AGRICULTURE.—At the annual meeting, the president, Mr. W. W. B. Beach, M.P., in the chair, the report stated that the position of the Chamber is sound and satisfactory, financially and otherwise. There was a balance amounting to £26 15s. 8d., which was nearly spent. Mr. Beach was re-elected president. The annual dinner followed, but there was only a small company present, "in consequence, no doubt, of the extreme wetness of the weather."

HEREFORDSHIRE CHAMBER OF AGRICULTURE.—At the annual meeting, in Hereford, Mr. J. B. Downing in the chair, the attendance was very thin. The Report could "not allude to a greatly increased number of members, yet they have the satisfaction of reporting that the losses from death and other causes have been compensated by the election of new members;" and then went on to review the proceedings of the past year. Mr. Rankin was elected chairman, and Mr. J. Morris, of Madley, vice-chairman for the ensuing year. Professor O'Hara was appointed analytical chemist for the ensuing year. Rule 17 was altered as follows: "That the Chamber subscribe £6 annually, and appoint a deputed member to attend the meetings of the Council according to the rules of the Central Chamber." At the annual dinner, 23 members only of the Chamber assembled in honour of the occasion—just about one-third of the company expected and prepared for!

HUNGERFORD CHAMBER OF AGRICULTURE.—A special meeting of the members was convened to listen to an address on the subject of "Local Taxation," by Captain Craigie, the secretary to the Local Taxation

Committee in London. The attendance was very limited. Captain Craigie gave a long address. Mr. Williams, of Baydon, proposed the following resolution, which was seconded by Mr. Woodman, and carried: "That this meeting fully concurs in the object sought to be obtained by the Local Taxation Committee, and pledges itself to support the movement; and towards this end it is of opinion that a sub-committee of the Chamber should be formed, to be called 'The Hungerford Taxation Committee.'" Mr. Chandler supported the resolution, and regretted there was so much apathy.

LEICESTERSHIRE CHAMBER OF AGRICULTURE.—The annual meeting was held at Leicester. The report recorded that nineteen new members had been made. The financial statement showed that the expenses of the year had been £54 17s. 1d., and that there was a balance due to the treasurer of £7. The arrears of subscriptions amounted to no less a sum than £54 10s.

THE NOTTS CHAMBER OF AGRICULTURE.—At the annual meeting, Mr. W. H. Barrow, M.P., in the chair, Mr. J. C. Musters was elected chairman of the council for the ensuing year, and Mr. Hemsley, vice-chairman. The annual report stated that, owing to exceptional causes, the subscriptions had fallen short of the year preceding, but a system had been matured of parochial collections, which it was expected would result in the realisation of outstanding arrears and of the amounts at present accruing. Mr. Walker moved, "That, in the opinion of this Chamber, the present system of local taxation is unjust, and ought to be amended, inasmuch as most of the objects for which it is imposed, such as the maintenance of the poor and of lunatics, the preservation of public order, the administration of justice, and the punishment of criminals, are of national, and not merely local, importance, and are for the benefit of all classes; that, therefore, all kinds of property ought to contribute to them, whereas at present, with few exceptions, real property alone is taxed, and personal property is exempt from those burdens." Mr. Musters seconded the motion, which was carried. The annual dinner was afterwards held.

AGRICULTURAL REPORTS.

REVIEW OF THE GRAIN TRADE DURING THE PAST MONTH.

The weather during the past month has been excessively mild for the time of year. Rain has fallen throughout the country very freely, and the soil is now thoroughly saturated to the depth of some inches, thus interfering with wheat sowing. This operation, however, except in the most backward districts, has already been completed. The supply of grass in the pastures and meadow lands is very good for the time of year, and cattle can obtain a fair feed with but little difficulty. Some complaints have reached us with reference to the potato disease, but the losses do not appear to have increased to any material extent. Although the young wheat plant is certainly forward for the time of year, and at present presents a most luxuriant appearance, nothing material has occurred to cause apprehension; but some cooler weather would doubtless be of service in checking its too premature development.

During the past month the position of the wheat trade has not varied to any material extent. The general inferiority of the quality of the produce has interfered considerably with business, and reduced transactions to hand-to-mouth operations, the speculative element being entirely wanting. At the close of last year the stocks of foreign wheat were estimated as follows:

	Qrs.		Qrs.
Stocks in the 11 principal ports Dec. 31, 1871..	1,787,181	Stocks in the 11 principal ports Dec. 31, 1870..	1,349,921
96 Cargoes off the coast at 3,200 qrs. each	307,200	19 Cargoes off the coast at 3,200 qrs. each	60,800
263 Cargoes on passage for orders and direct ports at 3,200 qrs. average ...	841,600	520 Cargoes on passage for orders and direct ports at 3,200 qrs. average ...	1,664,000
Total	2,935,981	Total	3,074,721

However, upon going more minutely into the statistics, it was inferred that the stocks in the smaller ports of the kingdom showed in the aggregate an excess of some 100,000 qrs. It was also argued that the estimate for grain on passage was underrated to the extent of some 150,000 qrs. Allowing the new estimate to be correct, the stock of *foreign* wheat in the United Kingdom would show an increase of something under 115,000 qrs. So far as our own crop is concerned, however, we cannot report so favourably. The reiterated statement that our harvest was sadly deficient so far as the wheat crop was concerned, is certainly confirmed: the actual deficiency being, say, 14 to 15 per cent. below the average. The imports have been on a fair average scale, and will probably continue to be so for some time, as there is still a good number of vessels on passage. There has been a moderate export. In the southern parts of France, prices have had a drooping tendency, but in the northern districts, as well as in Holland, a fair amount of firmness has prevailed. In France, white wheat would be very acceptable; and it is to be hoped that Spain will supplement her hitherto moderate shipments to Bordeaux by more extensive transactions, as well as allowing other nations to participate in her late bountiful harvest. Favourable accounts continue to come to hand from Chili, but from Odessa we hear that the bulk of the fine portion of the crop has already been shipped, and that the condition of that now awaiting transmission by no means comes up to recent samples. The weather will have great effect upon the trade. So far as can be at present ascertained, the demand will be of a hand-to-mouth character for some time; but a spell of frosty weather would induce much firmness. Fine samples, at the present moment, command very full prices.

As regards spring corn, fine malting barley has been in request, and has realised full prices. Oats have changed hands to a fair extent; but inferior samples being plentiful, have receded in value. Beans as well as peas experienced a fair demand during the earlier part of the month, prices ruling 1s. per qr. higher, but this advance was subsequently lost. Maize was dull and drooping in value.

The number of grain cargoes on passage for ports-of-call is 381—namely, 279 wheat, 38 maize, 43 barley, 12 rye, 8 beans, and 1 millettseed, against 655 at the same period last year—namely, 420 wheat, 92 maize, 87 barley, 40 rye, 4 oats, 7 beans, 2 millettseed, and 3 sundries. For direct ports there are at present on passage 34 grain cargoes—namely, 18 wheat, 12 maize, 2 barley, 1 oats, and 1 beans, against 68 at the same period last year—namely, 55 wheat, 10 maize, 1 barley, and 2 sundries. The number of cargoes of seed and Valonia on passage for ports-of-call is 38—namely, 26 linseed, 3 rapeseed, and 9 cottouseed, against 73 at the corresponding period last year, of which 45 were linseed, 5 rapeseed, 21 cottouseed, and 2 Valonia. For direct ports there are at present on passage 1 cargo of linseed, 1 rapeseed, and 6 cottouseed, against 4 linseed, 8 cottouseed, and 1 Valonia.

IMPORTS AND EXPORTS OF GRAIN.

The following statement shows the imports and exports of breadstuffs into and from the United Kingdom since harvest—viz., since August 26, 1871, compared with corresponding period in the three previous years :

IMPORTS.

	1871-2.	1870-1.	1869-70.	1868-9.
	Cwt.	Cwt.	Cwt.	Cwt.
Wheat	19,325,084	14,353,215	20,788,446	11,838,123
Barley	4,651,959	3,639,415	3,354,553	4,468,377
Oats	3,809,180	3,993,746	5,074,129	2,716,549
Peas	427,477	388,238	681,557	673,194
Beans	1,552,430	626,459	861,278	1,323,997
Indian Corn.....	8,452,683	7,605,340	9,076,076	5,378,270
Flour	1,458,495	1,980,617	3,061,150	1,555,321

EXPORTS.

	1871-2.	1870-1.	1869-70.	1868-9.
Wheat	1,700,726	1,168,122	110,230	132,538
Barley	9,180	19,534	6,170	55,312
Oats	57,337	373,095	24,884	38,483
Peas	4,688	28,664	6,583	6,395
Beans	1,484	4,875	942	2,594
Indian Corn.....	14,033	31,568	5,656	178
Flour	32,688	44,5232	7,844	17,634

In the Continental markets there has been no alteration of importance. In America the export inquiry has fallen off, and as stocks have not accumulated to any great extent, it is argued, certainly with some show of reason, that the United States have already disposed of the bulk of their available surplus. The quantity of wheat at Milwaukie in December was 540,824 bushels, against 947,855 bushels in 1870. The exports of wheat from the States from September 1st to December 29th was 1,058,830 qrs., against 1,242,612 qrs. during the corresponding period in 1870.

The hop market has been very firm, although business has not been on an extensive scale. Fine samples have been scarce, and there has not been much demand for yearlings. The best home-grown are now making £17 per cwt.

As regards potatoes, the supplies have been good, and the demand has been heavy, but prices have been tolerably firm. Complaints of disease are becoming more frequent.

REVIEW OF THE CATTLE TRADE FOR THE PAST MONTH.

The cattle trade has been devoid of any feature of especial interest. The mild weather which has prevailed has been unfavourable for killing, and to this circumstance must be attributed partially the depression which has characterised the demand. As regards beasts, the supply has been about an average, and the general quality has not been unsatisfactory. During the earlier part of the month, the tone was firm, and the best Scots made 5s. 10d. and in some few instances 6s. per 8 lbs.; but the demand eventually became very heavy, and a decline of fully 4d. per 8 lbs. took place, the best Scots not making more than 5s. 6d. per 8 lbs.

As regards sheep, the supplies have been moderate, but sufficient for requirements. There has been an absence of animation in the inquiry, but prices have been steady, and the best Downs and half-breeds have made 6s. 10d. to 7s. per 8 lbs.

Calves, the show of which has been good, have sold quietly at about late rates.

Pigs have been in moderate request, on former terms.

The total imports of foreign stock during the past month have been as follows :

	Head.
Beasts	3,027
Sheep	13,896
Calves	668
Pigs	250
Total	17,850

Corresponding period in	Head.
1871.....	10,298
1870.....	21,727
1869.....	12,214
1868.....	20,000
1867.....	24,084
1866.....	25,838
1865.....	16,952
1864.....	9,967
1863.....	11,893
1862.....	8,783
1861.....	2,708
1860.....	6,760
1859.....	9,264

The arrivals of bullocks from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years :

	Jan., 1872.	Jan., 1871.	Jan., 1870.	Jan., 1869.
Norfolk, Suffolk, Essex, and Cambridgeshire	5,800	7,650	6,350	5,184
From Lincolnshire, Leicestershire and Northamptonshire.....	1,700	1,200	1,750	1,850
Other parts of England	1,750	850	2,950	2,140
Scotland	646	910	1,120	2,376
Ireland.....	300	301	1,730	903

The total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month have been as under :

	Head.
Beasts	18,140
Sheep	73,120
Calves	848
Pigs	438

COMPARISON OF SUPPLIES.

Jan.	Beasts.	Sheep.	Calves.	Pigs.
1871	15,028	73,840	314	365
1870	19,251	91,760	1,127	965
1869	19,880	94,830	654	1,201
1868	17,620	86,220	520	1,610
1867	18,150	82,400	756	1,508
1866	24,620	89,390	1,754	2,225
1865	20,669	73,714	1,095	2,370
1864	19,442	80,230	1,019	2,567
1863	20,455	83,422	1,637	2,456
1862	20,680	82,160	853	2,850
1861	17,612	75,240	677	2,000
1860	20,500	92,426	1,067	2,045
1859	19,805	90,520	921	2,400
1858	20,312	80,742	1,108	1,759

Beasts have sold at from 3s. 6d. to 5s. 10d., sheep 4s. 4d. to 7s., calves 4s. 6d. to 6s., and pigs 3s. 8d. to 5s. per 8lbs. to sink the offal.

COMPARISON OF PRICES.

	Jan., 1871.	Jan., 1870.
	s. d. s. d.	s. d. s. d.
Beef from	3 6 to 6 0	3 4 to 5 6
Mutton	3 4 to 6 2	3 4 to 5 10
Veal	3 8 to 6 4	3 6 to 5 6
Pork	3 8 to 5 6	3 10 to 6 0
	Jan., 1869.	Jan., 1868.
	s. d. s. d.	s. d. s. d.
Beef from	3 4 to 5 6	3 2 to 4 10
Mutton	3 4 to 5 8	3 4 to 5 0
Veal	4 4 to 5 10	4 4 to 5 6
Pork	3 6 to 5 0	3 4 to 4 2

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

The proverbial sternness of January has, during the past month, given way to unusual mildness and abundant rains, though, after the first fortnight, we had two days of strong hoar frost. The nights too have been mostly wet, and some parts of the country have consequently been completely flooded. Field work, therefore, not completed in autumn, will probably have to be delayed till spring, and much valuable time, which otherwise would have been employed in preparation for the Lent corn, be lost. On the other hand the grass has commenced growing, and every green thing has been available for man and beast. Nothing, however, can compensate farmers for the serious damage done to their newly-thrashed corn; the condition of much has been so bad as to render it unsaleable and below millers' wants. We are thus reminded of the crop of 1860, when, with a fair yield, good samples were the exception. Yet, so far as the value of dry corn is concerned, we have rather gained 1s. than lost anything, and foreign samples in store have been constantly in requisition, at unaltered rates, notwithstanding the abundance in granary and the probability of early shipments in spring. Our sales in the 150 towns for four weeks, as compared with January 1871, were 44,211 qrs. short, chiefly, as we suppose, from the fact that farmers have deemed it injurious or next to useless to thrash in the midst of such damp. This quantity for these 150 towns alone, then, has put them out of funds, even at the rate of 50 per cent., to the extent of £110,000, simply on wheat, and for the whole country in a like proportion, at a time when they have scarcely known how to employ their hands. And nothing now seems likely to improve their condition but a dry time and moderate frost. February is mostly wet, and to wait for March winds seems too heavy a demand upon agricultural patience; yet so it must be to avoid sacrifice. By that time we may probably ascertain more clearly the deficiency of France, on whose stocks and imports the prices throughout the world greatly depend. At present that country continues well supplied, and prices have slightly given way, and nothing but a real and heavy pressure will greatly enhance them under the monetary obligations and heavy losses of that state. In Germany, amid the fickle weather, prices have been remarkably steady, as well as in Russia and America, these several countries being the principal sources of supply, and all seem looking for higher rates with the coming spring, whether fallaciously or not. The *Mark Lane Express* has given the usual estimate of the crops, but the accounts respecting wheat so greatly vary that no satisfactory calculations can be made, but the constantly occurring terms, "under an average," and "very bad," as well as "damaged before thatched," leave the impression that the diminution this season will, on the whole, be more than four bushels to the acre. If so, with our increased population, and that of Europe and America, it will be found out, and bring on a pinch just before the harvest, the slowness or severity of which will then be settled by the ruling weather. The following prices were recently quoted at the several places named. Best native white at Paris 66s. 6d., red 64s.; Marianopoli at Marseilles 55s., Ghirka 52s.; wheat in Belgium 57s. to 62s.; Polish at Amsterdam 63s.; Zealand at Rotterdam 47s. to 61s.; wheat at Lausanne 61s.; best red at Hambro' 61s.; high mixed at Danzig 60s.; native at Cologne 58s. 6d.; red at Rostock 55s.; Danish red, cost freight and insurance, 61s.;

Ghirka and Taganrog 43s.; wheat in Spain 49s. 6d. to 53s.; at Naples 57s. 6d.; at San Francisco 62s., cost, freight, and insurance; red at New York 49s. to 51s. 6d. per 480lbs.

The first Monday opened on small supplies of English wheat, with a great falling-off in foreign. But few fresh samples appeared on the Essex and Kentish stands during the morning. Really fine and dry parcels were firm, at the previous currency, though not in active request. Inferior and badly-conditioned were difficult to place. Good foreign red went off more readily, at unaltered rates. Floating cargoes being abundant were about 1s. lower. The country markets, scarcely out of holiday influence, and with very mild weather, ruled firmer than London, in some places noting an advance of 1s. per qr., as Birmingham, Newark, Newbury, Manchester, &c., but there were a few exceptions, as at Loughborough and Thirsk. Liverpool was 1d. higher on Tuesday, and again there was a rise of 2d. per cental on Friday. Edinburgh and Glasgow noted no change in wheat. Dublin was in calm, but not lower.

On the second Monday, native wheat was again in short supply, with only a small increase in foreign. There was once more a great deficiency in fresh English samples during the morning, and really fine and dry lots brought 1s. over the previous quotations, but damp sorts were difficult to get rid of. The business in foreign was on a larger scale, and fine red American in some instances made 1s. improvement, all other sorts being fully as dear. Floating cargoes recovered from the temporary depression, and sold at 6d. to 1s. per qr. above the previous quotations. The country trade this week was quite prepared to follow that of London, and, with very few exceptions, there was a general improvement of 1s. per qr. Liverpool, at the first market, evinced more tone, but on Friday the aspect of the trade reversed. Both Edinburgh and Glasgow improved to the extent of 6d. to 1s. per qr. Dublin was very firm; Belfast only quiet.

On the third Monday, the English supplies were further reduced, but there were good foreign arrivals. During the morning there was scarcely a fresh sample from Kent, and but very few from Essex, and these were of the damp type. Dry lots would have commanded a sale had they been exhibited, but inferior were still neglected. The foreign trade was then, however, very limited, and had sales ex ship been pressed, less money must have been accepted. Cargoes afloat were less in demand, though former values were maintained. As in London so in the country this week, all dry qualities were firm, but farmers found a difficulty in placing such as were out of condition. Liverpool was dull on Tuesday, and 1d. to 2d. per cental lower on Friday. A heavy trade was experienced both in Edinburgh and Glasgow, but quotations were unchanged. Both Dublin and Belfast were calm and unaltered.

On the fourth Monday, there was about the usual short supply of English wheat, but with fair arrivals of foreign from the Black Sea and India. The show on the Essex stands was about the smallest of the season, with nothing from Kent; the condition of all the samples was wretched, the wet weather having lasted so long, and the qualities on sale were quite below the requirements of millers. Dry sorts were wanted, and would have made fully the previous rates, but they were not to be found, excepting at the foreign stands. There, an increased demand was ex-

perienced, but the mildness of the temperature was against any advance. Though most of the floating cargoes had been placed, those then on hand tended downwards in value. Liverpool, on Tuesday, was dull, and 2d. per cental lower. At Hull, Newcastle, and several country markets, there was a calm without any change of value in dry qualities.

The imports into London for four weeks were 16,778 qrs. English, 83,301 qrs. foreign; against 20,827 qrs. English, 50,677 qrs. foreign in 1871. The exports were 4,073 qrs., against 4,431 qrs. The imports into the kingdom for four weeks were 2,685,279 cwt. wheat, 235,837 cwt. flour. The general averages commenced at 55s. 8d. and closed at 55s. 1d.; those of London opened at 60s. 1d., and closed at 58s. 6d. The four weeks' sales in 150 towns were 195,407 qrs., against 239,618 qrs. in 1871.

The flour trade has been quiet and unchanged through the month. Town millers have kept to 50s. as their top price, and about 39s. has ruled as the value of Norfolks, American barrels 29s., while anything extra has been worth fully 2s. per qr. more. There have been good supplies steadily furnished from the country, though foreign arrivals have been light. The imports into London for four weeks were 70,439 sacks, country sorts 6,272 sacks 16,294 barrels foreign, against 86,311 sacks country, 13,085 sacks, 74,153 barrels foreign in 1871.

Though the supplies of maize have only been moderate, the reduced value of beans and peas have lessened the consumption, and American qualities have given way 1s. per qr., not being worth over 32s. per qr. Without a reaction therefore in pulse, we do not see an immediate prospect of a rise in this grain. The London imports for four weeks were 42,008 qrs. against 23,931 qrs. last year.

The supply of British barley has been very short, and the value of good malting sorts has risen 1s. per qr., both in town and country; but the plenteousness of foreign has made the sale dull, and so much formerly heated grinding quality remains on sale that some sorts are not worth over 22s., while malting is held at 44s. The four weeks' supplies into London were 7,155 qrs. British, 62,364 qrs. foreign, against 13,402 qrs. British, 20,959 qrs. foreign in 1871.

The malt trade has been more active through the month, and prices have risen 1s. per qr., with good exports, say, 3,646 qrs.

With regard to oats, our supply has been almost entirely foreign, and that not in heavy quantities, only one parcel appearing from Scotland, and nothing from Ireland. The granaries have therefore been largely drawn upon; but our London stock at the close of 1871 was 480,000 qrs. Fresh 38 lbs. per bushel corn was worth 21s.; 40 lbs., 23s. 6d. The unusually mild weather may keep up supplies beyond expectation, but at present we do not see much prospect of a permanent decline. The four weeks' imports into London in English sorts were only 1,470 qrs., in Scotch 95 qrs., in foreign 135,392 qrs., against 1,473 qrs. English, 151 qrs. Scotch, 89,978 qrs. foreign in 1871.

The supply of beans during the four weeks of home-growth have been good, and of foreign liberal, and the mild weather has so deteriorated the condition of new samples that they have given way 2s. per qr.—Magazans having been sold at 34s. per qr., and other sorts in proportion; but fine old English sorts remaining scarce, have not been reduced in value to the same extent, or even old foreign, Egyptian sorts being about 34s. and Sicilian 38s. per qr. Should farmers still send damp new qualities, we may see prices yet lower; but with a return to frost there may be some reaction in the trade, though foreign supplies seem likely to prevent any great

advance. Imports into London for four weeks 4,715 qrs. English, 9,291 qrs. foreign, against 3,782 qrs. English, 2,914 qrs. foreign in 1871.

Of English peas there have been fair supplies, of foreign a mere nothing; yet the whole trade has been extremely dull, duns being only worth 36s.; maples, unless fine enough for seed, not over 37s. to 38s., and the best white warranted boilers only 40s. The mild weather has kept the value of the latter depressed, and without a frost there seems little chance of a rally. The four weeks' imports into London were 3,609 qrs. English, 243 qrs. foreign, against 1,786 qrs. English, no foreign in 1871.

With moderate supplies of linseed this grain has been quiet, though the value has been maintained, but the warmth of the weather has been against any activity in sales, either of seed or cake, and the late fall in beans and maize has also contributed to lessen the demand. As regards cloverseed and other seeds, prices have risen too much to make dealers anxious to increase stocks. New English red, as well as fine white Cloverseed, have kept at a high range; so little having yet appeared; but American red has been procurable at rather below the rates lately paid. Good trefoil has been a ready sale at full prices. Canary has somewhat improved in value, and spring tares began to attract attention, being offered from Germany at 40s., cost, freight, and insurance.

COMPARATIVE AVERAGES.

Years.	WHEAT.		BARLEY.		OATS.	
	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.
1868...	52,478½	71 6	71,265½	42 1	8,710½	25 7
1869...	70,452½	52 8	48,306½	49 0	6,346½	25 9
1870...	49,626½	44 1	56,850½	36 4	3,862½	21 4
1871...	67,782½	53 1	63,310½	35 2	4,703½	23 5
1872...	45,796½	55 1	60,743½	36 11	4,700½	22 9

AVERAGES

FOR THE PAST SIX WEEKS:	Wheat.	Barley.	Oats.
	s. d.	s. d.	s. d.
	Dec. 9, 1871.....	56 10	37 1	24 2
Dec. 16, 1871.....	56 5	37 1	22 10
Dec. 23, 1871.....	55 8	36 9	23 0
Dec. 30, 1871.....	55 4	36 5	22 0
Jan. 6, 1872.....	54 11	36 8	22 2
Jan. 13, 1872.....	55 1	36 11	22 9
Aggregate of the above	55 8	36 10	22 10
This same week in 1871.....	53 1	35 2	23 5

HOP MARKET.

Mid. and East Kent.....	£10 0	.....	£12 12	.....	£17 0
Weald of Kent.....	8 10	.....	9 9	.....	10 10
Sussex.....	7 5	.....	8 8	.....	9 9
Farnham and country	11 0	.....	13 0	.....	16 0

YEARLINGS.

Mid. and East Kent.....	£3 0	.....	£4 4	.....	£6 10
Weald of Kent.....	3 0	.....	4 0	.....	5 15
Sussex.....	3 0	.....	3 10	.....	5 5
Farnham and country	4 10	.....	6 0	.....	7 0
Old.....	1 5	.....	1 10	.....	2 0

POTATO MARKETS.

BOROUGH AND SPITALFIELDS.

Regents	100s. to 120s. per ton.
Flukes	100s. to 140s. "
Rocks	70s. to 85s. "
Victorias.....	120s. to 140s. "
French	60s. to 75s. "

SOUTHWARK WATERSIDE.

Yorkshire Flukes	100s. to 130s.
Regents	60s. to 100s.
Dunbar and East Lothian Regents	110s. to 130s.
Perth, Forfar, and Fife	85s. to 110s.
" " " " Rocks.....	85s. to 90s.
Kent and Essex Regents	60s. to 100s.
" " " " Rocks.....	60s. to 80s.
French Whites	50s. to 70s.

THE FARMER'S MAGAZINE.

FEBRUARY, 1872.

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PLATE II.—RIGHT AND LEFT.

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JAMES GIBBS AND COMPANY,

VITRIOL AND MANURE WORKS,

NEAR VICTORIA DOCKS, LONDON.

OFFICES — 16, MARK LANE, E. C.

SOLE MANUFACTURERS OF THE

PATENT AMMONIA-FIXED PERUVIAN GUANO,

Guaranteed to be made from the finest quality of Government Peruvian Guano, as imported. Has produced equally as good results as the unfixed Peruvian Guano, and is 30s. per ton cheaper. Recommended for all crops for which Peruvian Guano is used, and is found superior to it for Potatoes, Mangold, Beet Root, &c. In districts where the rain-fall is above an average, we recommend it for Turnips. It is not only cheaper, but also much more effective than Nitrate of Soda, as Top Dressing, and its effects are more lasting, as may be seen by the after Crops.

Patent Ammoniated Phosphate. Dissolved Bones.
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 Special Manures for Mangold, Barley, Grass, and Potatoes.

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The "condition" of the above is made a matter of special care. They are all sifted before delivery, to ensure their being fit for the dry or water-drill.

LONDON AND COUNTY BANKING COMPANY.

ESTABLISHED 1836.

SUBSCRIBED CAPITAL...£2,500,000, in 50,000 SHARES of £50 EACH.

PAID-UP CAPITAL...£1,000,000 RESERVE FUND...£500,000.

DIRECTORS.		
NATHANIEL ALEXANDER, Esq. T. TYRINGHAM BERNARD, Esq. PHILIP PATTON BLYTH, Esq. JOHN WM. BURMESTER, Esq.	THOMAS STOCK COWIE, Esq. FREDERICK FRANCIS, Esq. FREDERICK HARRISON, Esq. LORD ALFRED HERVEY.	WILLIAM CHAMPION JONES, Esq. E. HARBORD LUSHINGTON, Esq. JAMES MORLEY, Esq. WILLIAM NICOL, Esq.

TRUSTEES.

P. P. BLYTH, Esq. | J. W. BURMESTER, Esq. | W. CHAMPION JONES, Esq.

AUDITORS.

WILLIAM JARDINE, Esq. | WILLIAM NORMAN, Esq. | RICHARD H. SWAINE, Esq.

GENERAL MANAGER—WILLIAM MCKEWAN, Esq.

CHIEF INSPECTOR.

INSPECTORS OF BRANCHES.

CHIEF ACCOUNTANT.

W. J. NORFOLK, Esq.

H. J. LEMON, Esq., and C. SHERRING, Esq.

JAMES GRAY, Esq.

SOLICITORS—Messrs. STEVENS, WILKINSON, & HARRLES.
 SECRETARY—F. CLAPPISON, Esq.

HEAD OFFICE, 21, LOMBARD STREET.

MANAGER—WHITBREAD TOMSON, Esq. | ASSISTANT MANAGER—WILLIAM HOWARD, Esq.

THE LONDON AND COUNTY BANK opens—

DRAWING ACCOUNTS with Commercial Houses and Private Individuals, either upon the plan usually adopted by other Bankers, or by charging a small Commission to those persons to whom it may not be convenient to sustain an agreed Permanent Balance.

DEPOSIT ACCOUNTS.—Deposit Receipts are issued for sums of Money placed upon these Accounts, and Interest is allowed for such periods and at such rates as may be agreed upon, reference being had to the state of the Money Market.

CIRCULAR NOTES AND LETTERS OF CREDIT are issued, payable in the principal Cities and Towns of the Continent, in Australia, Canada, India, and China, the United States, and elsewhere.

The Agency of Foreign and Country Banks is undertaken.

The PURCHASE and SALE of Government and other Stocks, of English or Foreign Shares effected, and DIVIDENDS, ANNUITIES, &c., received for Customers of the Bank.

Great facilities are also afforded to the Customers of the Bank for the receipt of Money from the Towns where the Company has Branches.

The Officers of the Bank are bound not to disclose the transactions of any of its Customers.

By Order of the Directors, WM. MCKEWAN, General Manager.

“There are very few simple articles of food which can boast so many valuable and important dietary properties as Cocoa. While acting on the nerves as a gentle stimulant, it provides the body with some of the purest elements of nutrition, and at the same time corrects and invigorates the action of the digestive organs. These beneficial effects depend in a great measure upon the manner of its preparation, but of late years such close attention has been given to the growth and treatment of Cocoa that there is no difficulty in securing it with every useful quality fully developed. The singular success which Mr. EPPS attained by his homœopathic preparation of Cocoa has never been surpassed by any experimentalist. Medical men of all shades of opinion have agreed in recommending it as the safest and most beneficial article of diet for persons of weak constitutions.”

E P P S ' S

G R A T E F U L

(JAMES EPPS & CO., HOMŒOPATHIC CHEMISTS.)

C O M F O R T I N G

C O C O A.

“By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. EPPS has provided our breakfast tables with a delicately-flavoured beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly-nourished frame.”—*Extracted from an article on Diet in the “Civil Service Gazette.”*

No. 3, Vol. XLI.]

MARCH, 1872.

THIRD SERIES.

THE
FARMER'S MAGAZINE,
AND
MONTHLY JOURNAL
OF
THE AGRICULTURAL INTEREST.

Dedicated
TO THE
FARMERS OF THE UNITED KINGDOM.

LONDON :
PUBLISHED BY ROGERSON AND TUXFORD, 265, STRAND.

PRICE TWO SHILLINGS.

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--	--	--

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By Order of the Directors,

WM. MCKEWAN, General Manager.

LONDON AND COUNTY BANKING COMPANY.

ESTABLISHED 1836.

Subscribed Capital £2,500,000, in 50,000 shares of £50 each.
Paid-up Capital, £1,000,000; reserve fund, £500,000.

DIRECTORS.

Nathaniel Alexander, Esq.	William Champion Jones, Esq.
Thos. Tyringham Bernard, Esq.	Edwd. Harbord Lushington, Esq.
Philip Patton Blyth, Esq.	James Morley, Esq.
Thomas Stock Cowie, Esq.	William Nicol, Esq.
Frederick Francis, Esq.	Abraham H. Phillpotts, Esq.
Frederick Harrison, Esq.	Frederick Youle, Esq.

GENERAL MANAGER.—William M'Kewan, Esq.

CHIEF INSPECTOR.—W. J. Norfolk, Esq.

INSPECTORS OF BRANCHES.—H. J. Lemon, Esq., and C. Sherring, Esq.

CHIEF ACCOUNTANT.—James Gray, Esq.

SECRETARY.—F. Clappison, Esq.

HEAD OFFICE—21, LOMBARD STREET.

MANAGER.—Whitbread Tomson, Esq.

ASSISTANT MANAGER.—William Howard, Esq.

At the ANNUAL GENERAL MEETING of the Proprietors, held on THURSDAY, the 1st February, 1872, at the City Terminus Hotel, Cannon-street Station,

The following Report for the half-year ending the 31st December, 1871, was read by the Secretary.

WILLIAM CHAMPION JONES, Esq., in the Chair.

The Directors, in submitting to the Proprietors the Balance-Sheet of the Bank for the Half-Year ending the 31st December last, have the satisfaction to report that, after paying interest to customers and all charges, allowing for rebate, and making provision for bad and doubtful debts, the net profits amount to £93,098 5s. 11d. This sum, added to £4,449 17s. 4d. brought from the last account, produces a total of £102,548 3s. 3d.

The usual dividend of 6 per cent. for the half-year is recommended, together with a bonus of 3½ per cent., both free of income-tax, which will absorb £95,000, and leave £7,548 3s. 3d. to be carried forward to Profit and Loss New Account. The present dividend and bonus added to the June payment will make 18½ per cent. for the year 1871.

The Directors have to announce the retirement of their esteemed colleague, Lord Alfred Hervey, in consequence of his acceptance of the office of Receiver-General of Inland Revenue. Abraham Hodgson Phillpotts, Esq., has been elected a director in his stead, in accordance with the provisions of the Deed of Settlement.

The directors retiring by rotation are: Phillip Patton Blyth, Esq., James Morley, Esq., and Abraham Hodgson Phillpotts, Esq., who, being eligible, offer themselves for re-election.

The dividend and bonus, together £1 18s. per share, free of income tax, will be payable at the Head Office, or at any of the Branches, on or after Monday, the 12th instant.

BALANCE-SHEET OF THE LONDON AND COUNTY BANKING COMPANY, 31st Dec., 1871.

Dr.	
To capital paid up	£1,000,000 0 0
To reserve fund	500,000 0 0
To amount due by the Bank for customers' balances, &c. 16,116,730 5 9	
To liabilities on acceptances, covered by securities.....	2,778,016 6 7
	<hr/>
	18,894,746 12 4
To profit and loss balance brought from last account.....	4,449 17 4
To gross profit for the half-year, after making provision for bad and doubtful debts, viz.....	283,231 19 10
	<hr/>
	287,681 17 2
Cr.	
By cash on hand at Head-office, and Branches, and with Bank of England.....	£2,241,062 6 8
By cash placed at call and at notice, covered by securities.....	2,807,571 10 8
	<hr/>
	£5,048,633 17 4
Investments, viz.:	
By Government and guaranteed stocks.....	1,379,969 9 3
By other stocks and securities.....	124,845 0 4
	<hr/>
	1,504,814 9 7

By discounted bills, and advances to customers in town and country	10,941,853 5 6
By liabilities of customers for drafts accepted by the Bank (as per contra)	2,778,016 6 7
	<hr/>
	13,719,869 12 1

By freehold premises in Lombard Street and Nicholas Lane, freehold and leasehold property at the branches, with fixtures and fittings	248,517 17 4
By interest paid to customers.....	52,647 9 1

By salaries and all other expenses at head-office and branches, including income-tax on profits and salaries.....	107,925 4 1
---	-------------

£20,682,428 9 6

Dr. PROFIT AND LOSS ACCOUNT.	
To interest paid to customers, as above.....	£52,647 9 1
To expenses, as above	107,925 4 1
To rebate on bills not due, carried to new account.....	24,561 0 9
To dividend of 6 per cent. for half year	60,000 0 0
To bonus of 3½ per cent.....	35,000 0 0
To balance carried forward.....	7,548 3 3
	<hr/>
	£287,681 17 2

By balance brought forward from last account	£4,449 17 4
By gross profit for the half-year, after making provision for bad and doubtful debts.....	283,231 19 10
	<hr/>
	£287,681 17 2

We, the undersigned, have examined the foregoing balance-sheet, and have found the same to be correct.

(Signed) W. M. JARDINE,
WILLIAM NORMAN,
RICHARD H. SWAINE, } Auditors.

London and County Bank, Jan. 25, 1872.

The foregoing Report having been read by the Secretary, the following resolutions were proposed, and unanimously adopted:

1. "That the report be received and adopted, and printed for the use of the Shareholders."

2. "That a dividend of 6 per cent., together with a bonus of 3½ per cent., both free of income-tax, be declared for the half-year ending the 31st December, 1871, payable on and after Monday, the 12th instant, and that the balance of £7,548 3s. 3d. be carried forward to profit and loss new account."

3. "That Phillip Patton Blyth, James Morley, and Abraham Hodgson Phillpotts, Esquires, be re-elected Directors of this Company."

4. "That the thanks of this Meeting be given to the Board of Directors for the able manner in which they have conducted the affairs of the Company."

5. "That William Jardine, William Norman, and Richard Hinds Swaine, Esquires, be elected auditors for the current year, and that the thanks of this meeting be presented to them for their services during the past year."

6. "That the thanks of this meeting be presented to the General Manager, and to all the other officers of the bank for the zeal and ability with which they have discharged their respective duties."

(Signed) W. CHAMPION JONES, Chairman.
The Chairman having quitted the chair, it was resolved, and carried unanimously:

7. "That the cordial thanks of this Meeting be presented to William Champion Jones, Esq., for his able and courteous conduct in the Chair."

(Signed) WILLIAM NICOL, Deputy Chairman.
(Extracted from the Minutes.)
(Signed) F. CLAPPISON, Secretary.

LONDON and COUNTY BANKING COMPANY.

NOTICE IS HEREBY GIVEN, that a DIVIDEND on the Capital of the Company, at the rate of 6 per cent. for the half-year ending 31st December, 1871, with a BONUS of 3½ per cent., will be PAID to the Proprietors, either at the Head Office, 21, Lombard-street, or at any of the Company's Branch Banks, on or after MONDAY, the 12th instant.

By order of the Board,
W. MCKEAN, General Manager.
21, Lombard-street, Feb. 2nd, 1872.



**CARRIAGE
FREE.**



**SUTTONS' GRASS SEEDS
FOR ALL SOILS.**

SPECIAL CONTRACTS MADE FOR LARGE QUANTITIES.

SUTTONS' PERMANENT PASTURE GRASS SEED MIXTURES,

Prepared for various Descriptions of Soils. PRICE 22s. to 32s. PER ACRE.
For further particulars of SUTTONS' GRASS SEEDS FOR ALL SOILS, see SUTTONS' FARMERS' YEAR BOOK for 1872, gratis and post-free.

SUTTONS' PRIZE FARM SEEDS, CARRIAGE FREE.

Suttons' Mammoth

The most profitable and most nutritious Long Mangel! ever introduced.

Price 1s. 3d. per pound. Much cheaper by the cwt.

SUTTONS' IMPROVED MAMMOTH LONG RED MANGEL.
FIRST, PRIZES AND SILVER CUPS have been Awarded to this Mangel at the following Agricultural Meetings:—

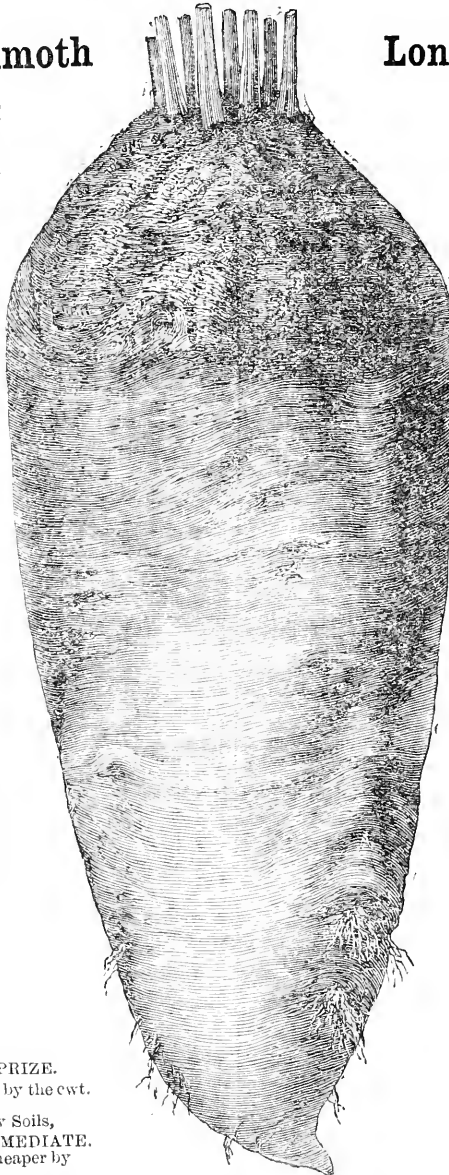
Bandon (Ireland), Barton, Bedale, Birmingham (for the fourth time), Bury St. Edmunds, Cheltenham, Chichester, Cuckfield, Dublin, Dunmow, East Street, Everacote, Faversham, Jersey (on the third time), Kewall, King's Lynn, Lanesdale, Leeds, Leicester, Long Sutton, Newmarket, Northampton, Norwich, Ongar, Pocklington, Reigate, Roscommon (Ireland), Royal Central Bucks, Rutby, Stamford, Stalham, Torrington, Tring, Tumberidge Wells, York (for the second time).

We offer three valuable Prizes for the best 12 Roots of this Mangel to be exhibited at the Royal Berks Root Show next November, and it is included in the Collection for which we offer a Silver Cup at the Birmingham Cattle Show, 1872. PRICE 1s. 3d. per lb.; much cheaper by the cwt.

Long Red Mangel.

The heaviest cropping Long Mangel in cultivation; 70 tons per acre having been grown in 1871.

Price 1s. 3d. per pound. Much cheaper by the cwt.



SUTTONS' IMPROVED MAMMOTH LONG RED MANGEL.

This variety was introduced by us five years since, and is quite distinct from, and far superior to any other Long Mangel. It has, for four years in succession (1865, 1869, 1870, and 1871), been awarded the First Prizes at the Birmingham Great Root Show. The specimens on our Stand at the late Smithfield Club Show, weighing 85lbs. each, were truly described as "Mammoth"; and yet the feeding quality was excellent. It is not only in size of individual roots, but in weight per acre that this Mangel has proved itself superior to all others. Our customers, Lord Northwick and Mr. Thos. Goulstoner, grew in 1870 64 tons per acre; and in 1871 our customer, Wm. Saylor, Esq., grew 70 tons per acre. As a feeding Mangel it is unequalled. The roots are particularly sound and solid, and having generally only one tap-root, it is most easily drawn. We have had this Mangel analysed by Professor Voelcker, who finds it to contain a larger proportion of saccharine matter than any other variety.

PRICE 1s. 3d. per lb.; much cheaper by the cwt.

The best Globe Mangel,

SUTTONS' BERKSHIRE PRIZE.

Price 1s. 3d. per pound; cheaper by the cwt.

The best Mangel for Shallow Soils,

SUTTONS' YELLOW INTERMEDIATE.

Price 1s. per pound; much cheaper by the cwt.

Prime New Yellow Globe and Long Red Mangel Seed, 8d. per lb.

For further particulars of CHOICE FARM SEEDS, see SUTTONS' FARMERS' YEAR BOOK,

Gratis and Post-free.

SUTTON AND SONS, Royal Berks Seed Establishment, READING.

THE FARMER'S MAGAZINE.

MARCH, 1872.

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LEIGHTON BUZZARD.

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THE
MARK LANE EXPRESS,
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PUBLISHED EVERY MONDAY EVENING, IN TIME FOR POST.

Office of Publication and for Advertisements, 265, Strand, London. May be had of all Booksellers and
Newsmen throughout the Kingdom, price Sevenpence, or £1 10s. 4d. per annum.



Berkshires
The above are the two dogs of Mr. John's English Sheepdog, purchased and bred in 1871
in one of the houses of the same breed, in 1871



On Monday, Nov. 11.
1851.

THE FARMER'S MAGAZINE.

MARCH, 1872.

PLATE I.

BERKSHIRE PIGS.

THE PROPERTY OF MR. JOHN BIGGS, OF CUBLINGTON, LEIGHTON BUZZARD.

This pen of pigs, bred by Mr. Biggs from his own sort, were farrowed on September 2nd, 1870.

At the Royal and Central Bucks show at Aylesbury in September, 1871, they took the first prize as the best pen of fat pigs.

At the Birmingham and Midland Counties show in November, they took the first prize in their class, and the cup as the best pigs of the section.

At Smithfield Club show in December, they took the first prize in their class and the silver cup, as the best pen of pigs in any of the classes.

We had not much opportunity of looking over this famous pen at Aylesbury, but on seeing them again at Birmingham we wrote thus: "Far away the best pigs were Mr. John Biggs' Berkshires, which might have taken any extra premium as the best of all, instead of merely the best of two classes." And, again, at the Smithfield show we said: "The silver cup for the best

pen of pigs in the Hall has now gone for four shows in succession to blacks. The judges had, indeed, a very poor opinion of the whites generally; and though they threw in a commendation here and there, or more properly but *two* commendations in *three* classes, they generally commended the three classes of 'other breeds,' or, in point of fact, Berkshires, where the three first prizes were taken by Mr. Biggs, who had already shown the strength of his hand at Birmingham; but the competition here was stronger, as evinced by the displacement of Lord Ailesbury's and Mr. Bailey's good pigs. It was, in fact, all through a capital show of Berkshires, led off by some of the most useful farmer's pigs ever exhibited."

These pigs were fed on barley and Rivett's wheat-meal, skim-milk, and Thorley's food. Their live weight was 17 cwt. 3 qr. 10lb. They were purchased by Mr. Brown, of Warwick Street, Leamington.

PLATE II.

ON MONDAY NEXT.

Who is there with soul so dead that does not give a glance, and follow it up by another and another, as he views the gallant veterans of the chase, struggling on the London flags, craning in all directions, as they wend their way to be bound to a new master, by the "Tat of the hammer," on Monday next? A sight of them must bring back to most of us some fond remembrance or sweet recollection of a distant country, brother-sportsmen, favourite meet, or clipping thing, and make the heart of many a once jolly country lad, but now a pent-up, lan-

guid, London-bound apprentice, beat again, as he catches a glimpse of the slashing-looking VILLAGER and his jovial comrades jogging through some murky back street. Aye, they make the poor heart of many a caged bird beat again for rural scenes, sports, and pastimes, the old house at home, and healthy, honest-looking faces. Or, if not they sigh again, as the kind cheery tones of old Will reach the ear, with "Cheer up, my lad, cheer up"—or "Coom, lassie, coom"—I would I were a foxhound!

THE FARMERS' CLUB.

FARM MANAGEMENT.

The first monthly discussion meeting of the Club for the present year, took place on Monday, February 5, at the Club-house, Salisbury Hotel, the Chairman for the year, Mr. H. Cheffins, presiding. The subject fixed for discussion was introduced by the Rev. G. Davies, Hall Place, Romsey, being "The Use of Method, Arrangement, and Observation in the Management of a Farm."

The CHAIRMAN said: Gentlemen, this is the first occasion on which I have appeared before you as your chairman, and I shall adhere to the promise which I have made more than once, that I would not inflict upon you a long speech. As this happens, however, to be our first meeting this year, permit me to offer my congratulations on seeing before me so many old friends of the Club in health and happiness, and to add that I am very glad to see that there have been so many new members during the past year (cheers.) I will not take up your time by entering into the subject before us, but I am quite sure from what I have heard of Mr. Davies, and from some knowledge of him as a resident in my own county, that we shall hear something that will interest us very much (Hear, hear).

The Rev. G. DAVIES read the opening address: This subject is of a homely nature, and, to a certain extent, lacks the dignity of the discussions to which the Central Farmers' Club may consider itself entitled. I trust, however, that whatever is practical may be by you excused, even if of a plain and homely aspect; and that an audience (which comprises many who know far more than I do of agriculture) will excuse remarks derived from daily life on a farm. We live, indeed, in an age in which "men run to and fro, and knowledge is increased." Men naturally therefore select subjects for discussion bearing on the advancing science of the age. The pioneers of progress are constantly at our elbow, and the tendency of discussion is towards progress—it is a go-ahead age. But retrospective glances are good. May we not be omitting some things which our more slow-going ancestors valued and worked out for us? Amidst the rattle of steam-engines and the odour of phosphates, may we not be omitting some of the simpler appliances which are also necessary component parts of a farming system? We certainly have progressed most wonderfully in all matters connected with the cultivation of land, and nowhere more than in Hampshire, because the discovery of dissolving bones, combined with the introduction in the last fifty years of turnips and swedes, has enabled us to cultivate hill-farms, which before were worthless (except as sheep-walks), because they were inaccessible to the dung-cart. At the same time, are there not some things in which we have gone back? I often hear the complaint on heavy lands, "Our clays cap so—run together after heavy rains—even more than they used to do." What, wonder? We shave our wheat-straw, and, indeed, all our straw crops off so close to the ground with the reaping machines, that in distant fields perhaps no vegetable matter is ever returned to the ground. But in olden times, when they reaped high, and then began winter-fallowing, there was after every straw crop about six inches of straw distributed, and not

only distributed, but placed in a most even way, so that it was restored to the ground, and not only that, but the under-side of the turned-over furrow was by this means wedged up as it were to let the frost and air circulate underneath. If you consider this going on for a long series of crops, can you wonder that the land changes character? I admit our forefathers' stubbles were foul, and that we have learned the value of straw for stock and also for feeding stuffs. Still, that does not alter the fact. Let a man cart out for his sheep to lay on of a wet night ever so little refuse straw, and see the difference in the work of that part of the field compared with the rest of the field. Take again the instance of chalking land. You will excuse my illustrative being in a great measure local; I am speaking of heavy land in the south of Hampshire, which is strong, good, wheat land, about thirty to thirty-six inches from the chalk. Now, in walking over that part of the country, you will see in every field one or more chalk-pits. I have in a forty-acre field a pit from which an acre of chalk has been dug, and put on the land—mind, a chalk-pit the area of which is an acre, and the depth thirty or forty feet. That field must have been in times gone by chalked over and over again, because three or four rods of area at that depth would chalk it all over once. And I conclude none was taken into other fields, because all the surrounding fields have their chalk-pits, and people would naturally cart from the nearest pit. I observe these chalk-pits have not been much used of late years, because in all my pits I find gun-flints and the stones chipped off them at the mouth of the pits. At the time of the Peninsular War the flints of these chalk-pits were largely used for gun-flints. It has been said to me more than once by strangers looking into these pits, "Why, what absurd people you Hampshire folk must have been; it surely never could have been intended that chalk should be put upon this soil because Providence has placed it so close; why, it is only three feet from the surface." On the same principle one might say in the Midland Counties the coal could never have been meant to smelt the iron ore, because it is so near. The test would naturally be this: take a piece of land just broken up out of a wood, which has never been chalked, although it has a chalk subsoil; try it without and with chalk, and you will soon find the wisdom of our forefathers. I will quite admit the immense progress of the age—steam-engines and the solution of phosphates were not problems for the infancy of farming; but yet our forefathers worked well with the materials they had at hand. Our returns are enormously more than our ancestors' on the same farms fifty years ago; but then our expenses are enormously more also. When they had no roots, because roots were not known, the labour bill was small. There was no necessity to employ labourers, because there were only cottages for the carter, the shepherd, and the thrasher, and these three functionaries did the work of the farm; and so it used to be a local proverb that a man wanted an active carter to get over the fallows, a lazy shepherd to make the sheep-feed last out, and a spiteful thrasher not to leave any corn in the straw. The labour accounts such as we have—equal to the rent, tithe, and taxes on a farm—

they knew nothing of, nor had they, I imagine, the enormous bills we have from blacksmith, wheelwright, harness-maker engineers, &c. Thus, to make a fair estimate of an improved position, we must look at both sides of the balance-sheet—expenditure and returns. I have been led into these remarks by two stories respecting past and present, which I shall venture to put before you. They both relate to fifty years ago. In the year 1870 I was talking to a labourer who had lived in the village all his life, and was seventy-six years old. We were in a wheat field, at harvest-time. I said, "I suppose you don't recollect so long ago, though you are old enough, what sort of corn crop this farm carried fifty years ago?" He replied, "This very field was wheat fifty years ago, and I mind it particularly because I was going to be married that autumn, and I worked early and late to earn money to furnish my home with." "Well," I said, "and compared with the present crop, what sort of a piece of wheat was there?" He said, "Rather more straw, and quite as much corn, as there is now." Now, my crop in which we were standing was a good crop—after swedes grown with superphosphate, and fed off by sheep, eating a little corn and cake. Supposing the sheep to pay for the artificial food, there would be still the expense of the root crop, say £4 an acre. "How was the crop grown fifty years ago?" I said. "It was a fallow, well knocked about for nine or ten months, and then a ewe flock, running sainfoin and clover leys, folded at night on the naked fallow." There is a picture of the same field under the same crop in the autumn of 1820 and the autumn of 1870. The old style was much less expensive, and the result as good. The question, then, arises, Are we better than our ancestors? The other anecdote is of a very different kind. A gentleman, who farmed some hundreds of acres of land, close to the town of Stockbridge, retired last autumn from farming, and, at his sale, he said, "I commenced this flock of Hampshire Down sheep, which will now be offered under the hammer, on this same estate in the year 1821; but half a century has altered prices very much. We must make great allowances for the exceptionally high prices of this particular season, but, after making this allowance, what a fearful difference! In 1821 I purchased the ewes from which this flock is descended for 12s. each, and the lambs at 8s. each. The ewes are now worth 48s. to 50s., and the lambs 40s. to 44s." Here is a wonderful picture—corn farming not much progressed; stock, quadrupled in value within half a century—or, to take off one-fourth for the exceptional year, three times the old value. I was telling this to a very experienced man, Mr. Westbury, of Andover, a well-known valuer, and asked him if my figures were correct. He said, "I myself am old enough to recollect something of the same sort. A man once offered me some couples (ewes and lambs), quite sound and healthy, at 7s. 6d.; 'But,' he said, 'it is 2s. 6d. a-head more than they are worth in the fair, and therefore, as a friend, I should not like to sell them to you.'" Of course, these figures apply, in matters of profit, to the breeder only—not to a man who buys a lean sheep and fats him, because this year the profit is to the breeder, and the fatter may even have to sell at a loss; certainly, if he bought in late, his profit will not be great.

METHOD.—With respect to the method which a man will pursue in farming, he will probably, to a certain extent, be bound down by his lease; and his lease, to a certain extent, may be a safe guide, because it is generally drawn from experience of the tillage most suitable to that particular locality. Still, I think, after a time, landlords will grow less stringent

in their leases, and, in fact, now the covenants are seldom kept strictly, except in the last two years. If a man is bound down not to sell hay, straw, or roots off a farm, he cannot hurt it much; if he is bound to keep so much stock per acre, he cannot much hurt a farm. Sometimes there are covenants in a lease which are very *injurious* to the tenant, without helping the landlord. In some leases in my neighbourhood the covenant is inserted never to have two white straw crops in succession. That is now changed for this greatly improved clause, "Not to grow two white straw crops in succession, unless after two root crops just preceding." Ours is a heavy wheat country. If wheat is followed by a root crop, fed off with sheep, and barley put in afterwards, the barley goes to straw, and exhausts the ground, without producing a good sample; whereas, barley sown on a wheat-stubble is often much more productive, and always of a better quality. Then, with a breeding flock, we are obliged to keep back our roots till March, April, and the first ten days of May, in order to support our lambs till the grass is ready. This land, so fed off, is often, if put in with corn, in bad tilth, and too late to expect any yield; whereas, by ploughing up the late-fed swedes, and putting in rape, or mustard, or vetches, or some other catch crop, for sheep to be fed off in the autumn, the cultivation suits the seasons, and then it comes well, twice folded, for wheat in October and November, and that wheat followed by barley or oats. This greater latitude in the leases is now being introduced, in deference to common sense. As a general rule, I think a man coming to a new county cannot do better than follow the system of that county, at all events, at first, let him look over the hedge and see what his neighbours are doing, and try to improve upon that; but, still, let him take the farming of the district as his basis. Look how different is the cultivation of Hampshire chalks to heavy land in Essex, for instance. In Essex, all your tackle made to fit a ten-turn ridge, so that your horses may always walk in the furrow; in Hampshire, no furrows, and the more your horses tread the ground the better; in fact, for wheat, we often drive flocks of sheep over the newly-sown corn to get the ground firm, and follow the plough with a presser. It is a bad compliment to any locality for a new man coming from another county to imagine the people who have lived there all their lives know nothing about farming; yet many a new-comer proclaims this when he sets at naught all the old views of tillage, implements, and cattle. I did this to a certain extent myself, and, therefore, I see the folly of it. I thought I could introduce long-woolled sheep, instead of the Hampshire Down; but I soon found the improved Hampshire Down was the sheep of the district and the sheep for the district. They work hard for their food, and fold well, and from an even distribution of lean in a fat sheep, are always saleable. In fact, the camel is not more peculiarly fitted to be the ship of the desert, than the Hampshire Down sheep for its own locality. I believe that it is a great mistake to take it into a grass country, as it is peculiarly liable to foot-rot, far more so than the long-woolled, whitefaced sheep. The same with the horses—one wonders at the Shire bred horse with so much hair about his legs. But to a horse walking all day in harsh clays and beds of sharp flints, that hair (though it looks ugly) is as useful as a beard to a colonial bishop subject to bronchitis. Then, again, in implements; the light swing-plough of Suffolk is a very pretty instrument compared to the two-wheel Hampshire plough with its shifting head gear for the beam to slip aside when the plough comes in con-

tact with an imbedded flint. However, our heavy land plough, with the shifting head gear, which we call "the gallows," was, I daresay, not invented in a day, or without great forethought, and certainly it admirably answers its purpose. In the same way I tried hoeing wheat on the strong land, but the hoe flies off the stone, and cuts out the wheat quite as much as it would cut the weeds. Again, look at the Hampshire way of making the sainfoin ricks in the fields close to the roots, and then cutting out the hay and feeding the sheep in cages made of the common ash-poles of the hedgerows. It seems to a stranger a very antiquated and wasteful way. But it is not, because if you have lambs folding first, and the ewes following, they eat up everything clean, and don't waste even a leaf of the hay. The stock ewe kept hungry to follow the fattening sheep is the best clearer up I ever saw. I knew a farmer who came from a distant county, who with new-born zeal set to work to carry all his hay home, cut it into chaff, bagged it up, brought it back, and gave it to the sheep in troughs. They did not eat it any cleaner, because they wasted none before. Look at the expense. To carry the hay to the homestead, pair of horses to cut it into chaff, then bags to be filled, and carting back to fields. Reckoning horses, troughs, bags, and men, I suppose I should not be wrong to say this involved a loss of 20 per cent. However, that person believes in local customs more than he used, and he has got the ash-cages back again, and one man and a boy manage 300 sheep very well on the old plan. He does not think now that the county he came from has a monopoly of wisdom. Whether I am right in my estimate of 20 per cent. on the value of the hay, being the difference or the proximate difference on the two systems, at all events the difference in expense is enormous. Quite enough, at all events, to make a difference of profit or loss on the whole sheep on a farm. And, after all, it is on things of this sort that the question hinges. Take the case of three men—a man who is extravagant in labour, a man who is liberal but judicious in his labour without being wasteful, and a man who is so mean in his labour that things are not done which should be. But the virtue lies in the mean between the two extremes—between extravagance and penuriousness. In the same way, if two men, one who buys and sells well, whether by himself or by commission, and one who sells badly, will lay all the difference of profit or loss. One man may save money, while the other will gradually be exhausting his capital. Even in the date of the leading fairs of a county a man may observe some things to guide him. Our chief early fairs are Stockbridge and Overton, large lamb fairs. They come in the second and third weeks in July, and I have noticed that within two or three days of that time, our trifoliums, sainfoins, and last vetches are done, and as we have no meadows what is to be done with the lambs?—sell or starve. The date of those fairs are guiding points to a man, they are his light-houses, he must steer by them. His down may keep his ewes going; but his lambs, if he is a large breeder, he must sell, because until his clovers afford another bite, or his giant sainfoin, he will be sorely pressed until his early autumn turnips and rape come in, which will not be until September. So much for the customs of a locality.

ARRANGEMENT.—Now, when I say a few words on arrangement in matters of detail, I speak again (I am aware) of those minutiae, which, though seemingly beneath the dignity of essayists, may contribute a great deal to the successful and pleasant working of a farm. On a large farm the study of arrangement is most necessary, in fact, this is as the oil

to the machine, which without it runs to wear and waste. Take for instance, the case of a man starting over-night to set out the work of a farm for the morrow, several teams of horses to be got out, and a large number of men, with the probable contingency that a heavy fall of rain in the night or a hard frost may make it necessary that every order must be supplemented with another to provide for emergencies. A man setting to work to do this without a business head or a knowledge of arrangement, will find himself very much in the position of a civilian who should be suddenly called on to march 20,000 troops in or out of Hyde Park. You may reply, "True; but then a large farmer would always have a bailiff to do this." I admit it, but then, if a man understood his business, he would never ask a foreman to do what, if he were put in the position, he could not do himself. How should he know that his foreman is doing it day by day to the best advantage, if he could not do it himself? Besides, a bailiff soon becomes your master if he finds you cannot do without him, or that you could not do if he left you what you expect him to do. I believe very much in the "power of titles" in agriculture as well as in other things, and that the education of the farmer cannot be too practical, cannot too much embrace the early stages of learning, the lower departments of knowledge, what will correspond to the catechism and primers of literary education. Let me illustrate by a very small matter. It was with us a very wet and catchy time at harvest, one man seeing his men stopped from cutting corn by a shower, set all hands to work to throw off the dry straw to catch the descending moisture, afterwards to draw the straw ready for thatching. The next day sets in hot, and a wheat rick was made in the afternoon, and next day thatched and safe. Another man tells his men to stand still; that makes them dissatisfied at losing half-a-day. When after a while he throws out his straw for thatching water has to be fetched in a water-cart some distance from a pond. When his wheat ricks are finished a delay occurs in the thatching, no straw being drawn. Here are three points lost at a very important time, and a wet wheat rick as a final result, all from what might by good management have been avoided. Take another case: one man has his turnip and swede crop in half-a-dozen different fields; another man has managed to throw his four or five course shift pretty much together. Look at the difference in the moving tackle from field to field, and after that in shifting hurdles, cages, &c., when the sheep are folding off the roots. I pass on to the third and last head to be considered, viz.:

OBSERVATION.—The observant man I take it to be one who thoroughly enjoys his farm, as the gardener enjoys his vinery or his greenhouse—one who spends his time on it, watching it and the plants that grow on it at all times of the day and in all seasons. He who loves his profession is the only man likely to get on in that profession—and thus the lover of agriculture watches it with an intense scrutiny in all its varied and delicious changes of season—ever looking forward to its successes with fondest hope, and even by its accidents and difficulties being braced to greater action; for difficulties are bugbears to fools but the instructors of wise men; and it is because so many difficulties have to be encountered in bringing farming operations to a successful issue that farming has in it so great a charm, and is so great a dispeller of listlessness and ennui. We all know (and some of us in this room have heard) those admirable statistics which Mr. John Bennett Lawes has drawn from the experimental observations in various plots of ground, stimulated and fed with different ma-

nures. Now, what he has so well done for the public, is what each man ought, however unconsciously, to be working out evermore for himself. And that he can do without expense; only let him, as he walks about, keep his eyes open and his mind at work. How much will accidents do to inform him? It was but last summer that I noticed a square piece in the middle of a wheat field, where the corn was a few inches shorter than the rest of the field. As the piece was about the size of a sheep fold, and the line of demarcation ran as regularly as the hurdles would, I went to the shepherd, and said, "I see such a piece looks as if the sheep had broken out from their fold when the mustard was panned for wheat last autumn." He said, "Yes, one night I suppose a strange dog must have run by the fold—for they did break out of that particular fold, and laid under a hedge in another field—and it could not have been long after I left them in the fold at sunset, for in the morning I found they had scarcely eaten up their bait." We know the value of bringing a ewe flock in full off clover leys and folding them thick between hurdles, as well as any one; but it was never brought home to me so clearly as by that accident. Those sheep had been one hour in that fold, and twelve hours on the next; and it was to be seen, by difference in straw and corn, exactly (as in Mr. Lawes' plots) what was the value of a sheep fold for corn; whereas, otherwise it would have been only known in a general way. If I had had a farming pupil with me, I think that would have taught him more than volumes on the same subject. Again, suppose one of our stock farmers to divide his lambs and fold them in the same field; the ewe lambs, being for stock, we do not want to feed, the wether lambs we do. I did this three years ago, and penned them over roots side by side. The ewe lambs had only hay. The wethers, with only a hurdle between, went down the same field in parallel lines, and I allowed them about four sacks per acre of oats in addition to the hay. I put that field in with oats in the spring; and, as near as I could reckon, there were four sacks an acre more on the part where the wether lambs were fed; so that I exactly got back my four sacks given in feed. If I had fed the whole field with sheep eating oats, I should not have been able to say whether the corn given had improved the crop or not. It was the accident which helped me. But the same thing holds good whenever there is only a partial distribution of manure. Supposing a farmer to be trying any top-dressing, it is always well to try some on a crop of which a ridge here and there is left unmanured; otherwise what is attributed to the manure may perhaps be due to the season or the tilth with which the crop was put in. It is our custom to drill all our root crops, swedes, turnips, and mangolds, with ashes and superphosphate. My custom, as my land is heavy, is to drill never less than 100 bushels of sifted ashes and 3 cwt. of dissolved bones. I find by getting the dissolved bone either from Mr. Lawes or Messrs. H. & T. Proctor, I am never disappointed in a crop. The expense of the bone and ashes is about 30s. an acre. It very often happens, owing to the ashes being damp, that the manure drills get stopped for a few yards while the seed barrel delivers the seed. The turnips or swedes get hoed in these patches, where the manure has not run the same as the rest of the field. In the autumn the exact value of the manure is easily estimated by taking a dozen roots from the manured and the unmanured drills, and estimating their weight. I am inclined to think the crops would stand on an average, as 15 tons per acre on the manured drills and 5 tons on the unmanured. The average weight of roots with manure would be as 6 lbs.

to 2 lbs., the bone and ashes making a seed-bed and giving the plant a great start in the early season of its growth. I may add, I prefer old ashes which have been exposed to a winter's wet and cold, because they are damp, which new ashes are not; and in our dry soils the damp of the seed-bed often brings up a plant, which with dry ashes would not start till a rain. If this calculation, which is open to your criticism, be correct, as I believe it is, the cost of the extra ten tons per acre is to be achieved at the rate of three shillings a ton. This fact would be a good motto to Mr. Lawes or Messrs. H. & T. Proctor in their annual circular; and if they send me an extra ton of manure with what I shall order of them this year, I will not put, as authors do now-a-days, "All rights in this publication reserved." Youth does not admit of the time to have accumulated knowledge by its own industry; but youth, by being distrustful of itself and humble, can glean an immense amount of information from others. Suppose a man to have a shepherd who has tended sheep on your farm for twenty or thirty years, how much may be learned from him, or from your carter or drillman's experience and observation in times past? "To pick the brains and inherit the experience of such as these is the practical way to learn of the past and to inquire of the days that are gone." Thus it is that accident often tries experiments for us, which we have not the energy to set about for ourselves. But if we observe them when they do occur, what matter? I have another one in my mind at this time. There is half-an-acre of ground in the corner of one of my fields which was let as an allotment-garden with some cottages for several years, and cultivated with spade husbandry. It has been now cropped for six years in the usual course of husbandry with the rest of the field under the plough. But I can see the boundary line to an inch—in every crop now after six years—which I suppose we should attribute partly to deep cultivation of the spade—partly to the manure—but chiefly to its having had entire rest for many years from cereal crop. If land gets (as the saying is) clover-sick by sowing clover oftener than once in eight years, does not land get wheat-sick and barley-sick which has had a white straw crop, on a low estimate, thirty times in fifty years. This allotment system of the labourer enables me here to quote an observation which occurs in the 6th page of Mr. Mechi's well-known Farm Manual. He there says: "The cottage garden, independently of its deeper cultivation, receives in manure thirty-two times the quantity that the farmer puts on his land. As is the meat made so is the manure. Now the labourer with his pig consumes perhaps three sacks of barley, which, at 7lbs. of meal to 1lb. of pork, makes 84lbs. of meat. That you will find is four score on one-eighth of an acre (the size of an allotment), or at the rate of thirty-two score of meat to the acre. The average of farmers do not make one score of meat to the acre." Mr. Mechi then quotes an instance from the 11th volume of the Royal Agricultural Societies' Journal, of a farmer who produced four-and-a-half score per acre. By consuming the whole of my barley crop this autumn I find I shall produce one-and-a-half score per acre of fat pork, and I suppose I might say about an equal quantity of mutton and beef. I should very much like to elicit the opinion of the meeting as to the quantity of meat which on an average farm could be produced profitably. As to warm food on animals, I think the labourer's pig gives the result of a continual experiment on a small scale. My labourers generally have the doll or cad pig out of the trip and keep it. I invariably find that this much-despised and injured offspring

of the sow in a labourer's hauds always walks in a winner over the whole trip of its brothers and sisters. I often say to the purchaser of such a small specimen afterwards: "Well, is the pig come to an untimely end?" and I invariably get the reply, "Gone far ahead of all the rest of the trip; just look over and see when next you pass." And whenever I have looked I have found it so. The secret is that the thrifty housewife always keeps the pot on, and the pig thrives accordingly. The moral of which would be—Why don't you boil everything for your pigs? That is a very difficult question to answer—it is a mere question of labour, and perhaps what can be done on a small scale profitably cannot be done on a large. Unless it was done regularly it would do no good. I often notice at the model farms I visit steaming apparatus put up, but not used. I suppose it is difficult to afford the spare man on a farm to do it. One can see the results ten years afterwards of where a dung heap has stood; but I never could get anyone to tell me why it is that where a hay rick or straw rick has stood the crop shows the place years afterwards. Admitted that small particles of vegetable matter may fall through; but even where there has been a bottom of faggots, and everything has been cleared up, still the effect is evident. And it almost seems as if the exclusion of air and light had the contrary effect to that which we usually attribute to it. Out of this close observation arises a sort of mental arithmetic, by which conclusions may be quickly formed. And nothing is more valuable—some such habit as this in the management of a farm. The mind of the experienced man in this way is like the table of a ready reckoner. I daresay it has struck many of us how frequently the man who has grown wealthy as a dealer or a farmer is found to be one who cannot write his name to a cheque. While many a scientific man by his side has grown poor. It seems a paradox which refutes the common saying that "Knowledge is power." But this is not so. The fact being that the uneducated man has knowledge but not book learning, and while the student has devoted a great portion of his time to polite learning, the uneducated man has sent the whole energy of his being, and the force of his observation into one single channel. After all "life is a system of compensation." We are more evenly gifted than we think for, and the man who cannot sign his cheque for a flock of sheep, may often have earned enough to write a good many. Is it not the case, that if a man lose one sense, another becomes quickened? No one knows a carriage is behind wanting to pass better than a deaf coachman, because his sight and his sense of feeling tell him by his own horses that there is a noise behind, though he is deaf. That a great many people can grow good kohlrabi that would not know how to spell the word, the following anecdote will tell: Two farmers were talking about it, and one was explaining to the other its valuable properties, how it should be grown, and so on. At last the other pulled out his pocket-book, to write down the word, with a view to ordering some seed, and said to the former speaker, "Well, how do you spell the word?" Spell it? why, the same as other words to be sure; how would you have it spelt. Now, I won't tell you any more, you want to know too much." When I say "mental arithmetic," or the power of reckoning the cost and expense of anything, I mean something like what the sheep-dealer does when he reckons by scores: as a score of sheep at 35s. 6d. each, will be £35 10s., and so on. If a man could tell without hesitation what he could take in 100 lambs for, to find hay and

roots; what to take them in with half-a-pint of oats a day, or half-a-pound of cotton-cake; or, what he could take in 100 ewes with hay per week, he would then be able to say in a moment what per month, what to winter them. And suppose he could take in a lamb for 8s. per head, or a ewe for 12s., to winter, he would be able to see at once, whether, in such a year as this, with turnips to be ploughed in or given away, it would pay him to buy or to keep sheep for other people. The other day a person said to me, "I have got a chance to supply a stable with straw. Had I better exchange the straw for the manure made by that straw, even; or had I better sell the straw at £3 per ton, and buy back the manure at 14s. a waggon load?" I don't suppose there is much difference, it will come to much the same thing. I said, you had better weigh out a ton of straw, use it in your own stable, and then load the proceeds, as rotten manure, into a waggon, and you will see there is a very great difference. I believe considerably more than half, which would be £1 10s., out of £3. I believe more than that even, and that £3 worth of straw at present price, would come back in about a waggon and a cart, as well-rotted compost. I have tried it, and I have had the experience of others who have tried it, and I believe those whom I have asked, put it at a greater difference than I do. In the same way one may think to keep mangold or carrots till the spring, and get three or four shillings a ton more for them, and the inexperienced man may fancy he has done. But take the expense of clamping, the risk of decay, and chiefly the loss in weight, we should admit the earliest sale made on the ground in the autumn, even if it was twenty-five per cent. less, would be the most profitable. It is time now in a few more lines to bring this paper to a conclusion. What I have offered has been written for plain practical men, and, as I said in the beginning, falls rather below the dignity of a club like this, which contains many men of high position and great knowledge. In fact, this club is, to a certain extent, a sort of agricultural House of Commons, and would come within the meaning of Tennyson's expression in "Locksley Hall,"

'In the parliament of man—the federation of the world.'

But these debates are real far beyond the members of this club; they are printed in the farming papers, and our ideas are picked to pieces over a many a fireside. I presume, therefore, I shall be forgiven for having taken my ideal of a farmer—not from the aristocracy of agriculture, but from the farmer as he exists as a class, including every one from the man just above the labourer, through a long ascending scale up to the manipulator of a large acreage. I have been rather "calling simples" than offering any scientific researches; and my remarks are as if one was to place a herbal by the side of some learned professor's treatise. Thoughts like these form starting points for other thoughts, and as men pause and become thoughtful so they become wise and practical. I have said do not despise what our forefathers practised merely because it is old. We should be surprised if we looked back more—but who, alas! looks back in this go-a-head age? It is like the motto over the spill in the Melton Mowbray brook, "Pace too good to inquire." If we looked back we should be surprised to find how old many of our good ideas are. Take the old school-book the Georgies of Virgil: there we find the long fallow described as the only thing that bursts the barn doors; we find the pulse crop spoken of as (next to fallow) the best change for land tired of white straw crops there is the caution to put

vitriol to your wheat, and if Mr. Hallett wants a Latin motto for his Pedigree wheat he will find it well in the first Georgic; and Virgil, quoting from still older writers, Varro and Columella, speaking of the selection of large kernels, says that selected seeds degenerate except by continued selection:

Vidi lecta diu, et multo spectata labore,
Degenerare tamen; ni vis humana quotannis
Maxima quæque manu legeret: sic omnia fatis
In pejus ruere, ac retro sublapsa referri.

Which would be a very practical motto, saying, "Not only buy Pedigree corn, but buy it every year, as it goes back." I will not touch upon the education of a farmer, because that is a subject which we shall no doubt have some day in a separate paper by some competent person; but this only will I say that I have endeavoured to show that no education of colleges or of books, excellent as they are, can supersede continual habits of observation, method, and arrangement. And herein exists the answer to the often-asked question, How is it gentlemen farmers don't make money? Because they never began to learn at the bottom of the question. They are in the hands of other people; and how large a margin exists between the balance of a man who buys and sells well and one who does not! The book-educated man would not have picked out the cow offered at dairy price in Devizes market, and yet I should like to have for a fortune the money that one animal produced when Mr. Stratton's observed eye fixed upon her, as the basis of a long line of illustrious Short-horns. A practical man can tell more about how sheep are doing, by looking into the wool over a hurdle, than an unpractical man would by handling every sheep. We have had, gentlemen, an unexampled year, in which we have been nearly ruined by the excessive prodigality of nature in one root crop. I never could understand an old Greek proverb till this year. The proverb is—"The half is greater than the whole"; but this year half the crop of roots would have enabled us to buy sheep to fat, the whole crop has raised lean stock to such an exorbitant price that the roots are of little value. As I have had to read the first paper at a short notice, I am sure you will accept the errors of a somewhat hastily prepared composition, and in your after observations, put me right where I have erred in the estimates of calculations which I have made. I should be glad if some gentleman present would tell me how it is, that when rents, labour, tithes, and taxes were so much the same as they used to be (Cries of "No, no")—well, supposing such things to be the same as they were formerly, farmers were not doing as well as they did?

Mr. T. HORLEY (The Fosse, Leamington) said: Mr. Davies having told them that the cost of wages was much the same as it used to be, he should be glad if he would tell them what it was in his own district?

Mr. DAVIES said, what he meant was, that the wages of individuals were very much the same. Of course, if 20 labourers were employed now were five were employed formerly, the total was proportionately large.

Mr. HORLEY: What wages do you pay?

Mr. DAVIES: 13s. a week. You cannot get a man for less (laughter).

The Rev. E. SMYTHIES (Hathern Rectory, Loughborough) said that as in these days almost everything was in a progressive state, perhaps it might be well if some one suggested there had been a little improvement in farming (Hear, hear). He must confess that when he first saw the title of the paper he was a little puzzled to know what would be the precise

nature of the subject. Perhaps it would have been well if under the head method, arrangement, or observation, in reference to farming, Mr. Davies had said something about farm buildings. That was a very important question in his opinion, in relation to good husbandry. Every one who had any practical acquaintance with agriculture must be aware that there were two sorts of farm buildings erected, each, perhaps, costing £2,000, one adapted to a farm of 500 acres, and the other to a farm of 150 acres, and that there was exhibited a total want of method and arrangement. They all knew that the ordinary style of farm buildings was a haphazard style, so that if the buildings had fallen down from the clouds it would scarcely be less adapted to the requirements of the farmer. Some years ago, having to erect a set of buildings for himself, he had great difficulty in obtaining the requisite information and knowledge for his guidance; but, by dint of great pains, and as the result partly of information obtained from others, and partly of his own observation, he did succeed in getting what he wanted. He found it very difficult to discover anything like a practical system which included a perfect conservation of manure, and the making of manure in the most concentrated forms at the least possible expense—such an arrangement that the largest quantity of cattle, sheep, and horses, could be left in the buildings in the most economical manner; and he thought that subject was well worthy of the attention of the Club (Hear, hear). The grand point in his opinion was to have the farm buildings managed in such a method that the straw, which is the bulkiest article we use, and which every department of farm buildings require, should only pass in one direction, and never go backward and forward, so to speak, but pass from the stack-yard to the thrashing barn, from the thrashing barn to the cart-horse stables, then to the chaff-cutter, to the place where it is to be mixed with pulped roots, to the sheds and ranges down which it is carried to feed the cattle, from thence to the manure place where it is to be deposited, and then to the land where it is to be ploughed in and finally disposed of (Hear, hear). He should be glad to hear some practical remarks on that important question that evening. He had himself adopted the kind of arrangement that he had described, and his plan included the pumping of liquid manure, so that the straw got thoroughly saturated before it reached the land where it was wanted. Another very important point which had struck him was the position of grass and arable lands in relation to buildings so as to have the maximum of the arable land nearest to the farm-yard and the grass land at a greater distance. There was not, he believed, a practical man in this country but that knew how many farmers were compelled by the bad arrangements of their farm in that respect to have not merely the best land, but even poor grass land, close to the buildings, while the arable land was a long way off. That was a great source of loss, and he did not suppose there was a manufacturer in the kingdom who could hold up his head if his business was carried on in a similar manner. Manufacturers presented in that respect a great contrast to agriculture (Hear, hear). So fine was the rate of profit among manufacturers, owing to the pressure of competition, that he had been assured by people who knew Manchester well that if a mill or warehouse had not a lift to hoist things up to the top of the premises in accordance with the universal practice, the proprietor would be beaten out of the market. So great would be the loss of time of having everything carried upstairs that the fraction of a farthing per lb. extra in the cost of a pound of yarn would

make the difference between profit and loss. If that were true of manufacturers and warehousemen, it was equally true that farmers must suffer seriously, if, owing to the want of proper method and arrangement, the maximum of mutton and beef and pork were not produced by the minimum of labour (Hear, hear). In the midland counties, with which he was best acquainted, he had often seen an awful place in the middle of a farmyard, and a man up to his middle while carrying a heavy load of straw or hay, and perhaps the poor fellow had to climb up a steep place where in frosty weather he ran great risk of losing his legs. That was, he maintained, a gross practical mistake. Manure ought to be made under cover, and the farmyard along which men had to go backwards and forwards should be paved like one of the streets (Hear, hear). What Mr. Davies said about the spelling of kohlrabi reminded him of an anecdote which he once heard. A gentleman at Dublin, having asked a friend to dinner, the party invited wrote, as an excuse, that he was suffering from a severe attack of gout. The next morning the gentleman called upon his friend, and said, he was very sorry that he was suffering from gout—that he knew he used to suffer from rheumatism—but that he did not know that he ever had the other ailment; to which the gentleman replied, “Would you have me waste my time in trying to spell ‘rheumatism’?” (laughter).

Mr. G. H. RAMSAY (Newcastle-on-Tyne) must say that certain things mentioned in the introduction certainly did not apply to his part of the country. Generally speaking farmers there had good farm buildings; they had excellent cattle, including some of the best Shorthorns in the world; and they were not as slow as it might be inferred that farmers were from Mr. Davies' paper. He had often questioned Mr. Mechi about his balance sheet, and he should be glad if Mr. Davies had given them a rough balance sheet showing what was the result of his principles. He said it was hardly to be expected that in these days a clergyman would be able to produce a satisfactory balance sheet; and he must remind the rev. gentleman that the great regulating principle in reference to all such matters as he had referred to was the principle of supply and demand.

Mr. J. TRASK (Northington Down, Alresford) said, as a Hampshire man he could not admit that the rev. gentleman who introduced the subject represented the views of the Hampshire farmers. For example, Mr. Davies, in speaking of chalk, said he had so much of it in his field, that it wasn't necessary to put it on the land; that although that was done in former times it would be too expensive now. He could tell him that it was done by the best farmers in Hampshire at present (Hear, hear), and there would be more money spent in that way if there were a better understanding between landlord and tenant (Hear, hear). With respect to the prices realised at Mr. Attwood's sale, he must remark that last year prices were exceedingly high, and that if the same things had been brought to the hammer in 1868 or 1870 they would not have fetched a great deal more than they would have done fifty years ago. He was surprised to hear the statement that wages in Hampshire were only 10s. a-week. That didn't at all accord with his experience (Hear, hear). Moreover, he knew something about the amount paid by the rev. gentleman's own neighbours, and speaking generally, he had no hesitation in saying that the average amount of wages paid in Hampshire was 15s. or 16s. a-week. He farmed several hundred acres of land, and frequently associated with agriculturists both of North and of South Hants, and he repeated

that Mr. Davies' views did not at all accord with their experience.

Mr. H. NEILD (The Grange, Worsley, Manchester) said, although he agreed with Mr. Davies that they were too apt to underrate their forefathers, yet he must remind him that the practice of farming had recently undergone great improvement, and he could add that it would be impossible for rents, rates, wages, and expenses generally, which had in some cases doubled, and in others trebled, in amount, to be paid if improvement had not greatly developed the products of the soil. Statistics showed that in the last twenty years the produce of the soil had increased enormously. With regard to the arrangement of farm buildings, he must remark that circumstances altered cases, and that the same rule could not possibly apply to all localities. The practice of the gentleman who introduced the paper seemed to be almost entirely confined to sheep on the chalk-soil of Hampshire. He (Mr. Neild) had no knowledge of that county, but he might say that what Mr. Davies described would not answer in his part of the country, and perhaps it would be better even for that gentleman if, instead of selling his turnips at the price he mentioned, he kept some good beasts, and saw something of the other side of farming.

Mr. H. TRETREWY (Silsoe, Ampthill) said when that subject was placed on the card, he felt that it was rather indefinite, and had some doubts as to how it would be treated, and he must confess that he was now disappointed at the way in which it had been brought forward. He thought they would have had something more tangible. The introducer treated the question in such a discursive manner, that he felt it exceedingly difficult to follow him, but there were two or three points to which he wished to draw attention. In the first place, with regard to chalk, he quite concurred in what had fallen from Mr. Trask. He did not know what was now the practice in Hampshire or the western counties, but chalking was certainly by no means abandoned in Hertfordshire (Hear, hear). He happened to know something practically of that matter, and he considered chalking, even now, one of the best operations that could be conducted on a farm. Indeed, he knew nothing scarcely that conduce more to the fertility of the soil, even where chalk lay within a foot or two of the surface (Hear, hear). Another point to which he wished to refer had reference to root crops. Mr. Davies wished such crops to come pretty near together, so as to save labour. They all knew, however, that a farm might consist of a great many soils, and that it was not all fields that would carry roots; besides which they had to consider rotation, and to bear in mind that there were many things of more consequence than roots. What Mr. Smythies said respecting the arrangement of farm buildings was no doubt right to a certain extent, or under certain circumstances; but as regarded that all arable land should be near the homestead, he must observe that they all knew as practical men that frequently their best grass land was near the homestead.

The Rev. E. SMYTHIES: It may be the worst.

Mr. TRETREWY: He said that generally the best grass lands were near the homestead, and he thought any man who knew much about farming would confirm that statement, and it would be an utter muddle to plough up such land in order that the arable crops might be near the homestead. Mixed soils required a proportionate mixture of crops, and mathematical rules could not be carried out amid such variety. As to the remarks of Mr. Davies about farmers when they

came into a fresh locality looking over their neighbours' hedges to see what they were doing, he thought they were all pretty well aware of the necessity for that (Hear, hear). They all knew that if a farmer went into a strange neighbourhood and carried on there his old ideas connected with soil and climate, he would very soon come to grief. Another idea which the introducer of the subject seemed to think novel, was that when lands were drained the drains should be mapped. Why he (Mr. Trethewey) had supposed that there was scarcely a land agent or farmer in the country who didn't know how the drains ran, and he might add that it was the duty of occupiers to see that the drains were properly clear.

Mr. J. J. COOPER WYLD (London) regretted that nothing had been said in the course of a discussion with regard to method on the proper management of time, or the distribution of men over a farm so as to secure the greatest economy of time. They all knew from experience that, not only in farming but in all the affairs of life, the man who had no method as regarded time was sure to be a muddler, and that it was the man who was methodical in the arrangement of time that was most likely to prosper, while those who neglected that duty very frequently came to the workhouse.

The CHAIRMAN, in summing up the discussion, said he agreed with Mr. Davies that success in farming depended greatly on method. He also agreed with Mr. Smythies that in the midland counties there were to be found some of the most wretched homesteads on the face of the earth, and he might add that on the following day it would be his duty to go down there, and try and upset some of them, with the view of substituting better ones. With respect to chalking, he recollected reading a remark of an esteemed member of that Club, Mr. Cathbert Johnson, to the effect that chalking was good for the father and bad for the son.

The Rev. G. DAVIES having briefly replied, a vote of thanks was given to him as the introducer of the subject, and a similar vote was accorded to the Chairman.

At a meeting of the committee, on Monday, February 5th, Mr. Henry Chellins in the chair, there were also present Messrs. G. M. Allender, J. Bradshaw, J. Brown (March), W. Brown (Tring), T. Congreve, L. A. Coussmaker, J. Cressingham, T. B. Dring, J. K. Fowler, J. Howard, M.P., T. Horley, jun., R. Leeds, E. M. Major Lucas, R. Marsh, G. Martin, F. Neame, R. J. Newton, T. Owen, C. S. Read, M.P., B. P. Shearer, G. Smythies, J. B. Spearing, J. Thomas, W. Thompson, jun., H. Trethewey, J. Tyler, A. Voelcker, and J. Weall.

On the motion of Mr. Congreve, seconded by Mr. Sewell Read, it was resolved to present a memorial to the Chancellor of the Exchequer, submitting that agriculturists should not be liable to a dealer's licence for buying and selling horses.

It was resolved to take up six further shares in the Great India Peninsula Railway Company.

The following members have been elected for 1872.

E. R. Blewitt, Dovers, South Hornchurch.
 J. Carlton, Norbury Booth Hall, Knutsford.
 H. Dilben, Critchell, Wimbourne, Dorset.
 F. Eve, Newport Pagnell.
 R. Hardacre, Hellfield, Leeds.
 J. T. Homer, Hensworth, Wimbourne, Dorset.
 L. Taylor, Wrotham Park, Barnet.
 J. W. Wilson, Broadway, Worcester.
 G. Wise, Woodcote, Warwick.
 W. Bailey, Great Canfield, Essex.
 J. H. Baxendale, Worpleston, Guildford.
 R. Boning, Winfield House, Boro' Green, Sevenoaks.
 R. C. Catlin, Needham Hall, Elm, Wisbech.
 J. Ford, Portland Lawn, Leamington.
 R. Forrest, Llanfoist, Abergavenny.
 W. Golding, Leavers, Tonbridge.
 A. Stone, Hextable, Dartford.
 H. Brierly, Church Lawford, Warwick.
 F. Carr, Heslington, York.
 J. Carter, Great Marlow.
 W. Farthing, Stowey Court, Bridgwater.
 G. E. Harris, Hamstead Farm, St. Albans.
 J. H. Johnstone, Trewithin, Probus.
 M. Savidge, Sarsden Lodge Farm, Chipping Norton.
 W. Trethewey, Tregoose, Probus.
 R. Warner, Weston Hill, Bulkington, Rugby.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, Feb. 7, 1872.*—Present, Sir Watkin W. Wynn, Bart., M.P., President, in the Chair; Lord Chesham, Lord Kesteven, Lord Tredegar, Lord Vernon, the Hon. Wilbraham Egerton, M.P., the Hon. H. G. Liddell, M.P., Sir T. Dyke Acland, Bart., M.P., Sir A. K. Macdonald, Bart., Mr. Baldwin, Mr. Barnett, Mr. Clive, Colonel Challouer, Mr. Davies, Mr. Dent, M.P., Mr. Druce, Mr. Edmonds, Mr. Brandreth Gibbs, Mr. Horsby, Mr. J. Bowen Jones, Colonel Kingscote, M.P., Mr. Leeds, Mr. D. McIntosh, Mr. Masfen, Mr. Milward, Mr. Pain, Mr. Randall, Mr. Rawlence, Mr. White Ridley, M.P., Mr. Shuttleworth, Mr. Statter, Mr. Thompson, Mr. Torr, Mr. Jabez Turner, Mr. Wakefield, Mr. Earle Welby, M.P., Mr. John Wells, Mr. W. Wells, M.P., Mr. Whitehead, Major Wilson, Mr. Jacob Wilson, and Dr. Voelcker.

The following new members were elected:

Backhouse, R. Onions, Westwood, Bridgnorth
 Bailey, J. B., 4, Coley Hill, Reading
 Ball, James, Peterstone Mills, Cardiff
 Beasley, J. Noble, Pitsford Hall, Northampton
 Benson, C., 93, Bull-street, Birmingham
 Blackstock, John, Hayton Castle, Maryport

Cadle, Miles, Stockton-on-Tees
 Danson, John Towne, Carnsdale Farm, Barnston, Binckenhead
 Edwards, D. T., Taif Well, Cardiff
 Edwards, Richard, Trevern Hall, Welshpool
 Farmer, Charles Haywood, Comberford Hall, Tamworth
 Farrer, H. R., Green Hammerton, Noak
 Fisher, Edward, Grove Hill, Beverley
 Fitz-Herbert, W., Swynnerton, Stone
 Foster, Matthew Henry, Little Wymondeley, Stevenage
 Hodgkinson, F., Kirkby Hardwick, Sutton-in-Ashfield
 Hodson, J. H., Loose Court, Maidstone
 Holmes, William, Cloverdale Island, Magee
 Jackson, G., Higher Peover, Knutsford
 Jackson, T. Finch, Tattenhall Hall, Chester
 Keightley, A. D., Old Hall, Milnthorpe
 Kings, W. Padbury, Lower Heyford, Banbury
 Leney, Edward, Hadlow Place, Hadlow
 Lloyd, R. T., Aston Hall, Oswestry
 McCalmont, A. Leighton, Broodgate Farm, Romsey
 McDougall, J. T., 158, Leadenhall-street, E.C.
 Mansell, T. J., Adcott Hall, Baschurch
 Minton, John, Forton, Shrewsbury
 Mockford, W. G. S., Vaubrugh House, Blackheath, S.E.
 Morley, R. N., Leadenham, Grautham
 Oldham, Tom Edward, Loddington Hall, Kettering
 Paddison, C. T., Stapleford, Newark

Peart, Isaac, Tewin Bury, Hertford
 Pidgeon, Hubert H., Torrington
 Proby, The Hon. W., Glen Art, Arklow, Ireland
 Proctor, H. Matthews, Hill House, Wykeham, Spalding
 Proctor, M. M., 49, Thornhill-square, Barnsbury, N.
 Read, James, Salisbury
 Smith, Henry F., Lanworth House, Sutton, Yorkshire
 Stewart, W. M., Culbourn House, Stranraer
 Thompson, James, Castle Meadows, Kendal
 Tsdall, E. C., Holland Park Farm, Kensington, W.
 Trethewy, William, Tregoose, Probuss
 Turbervill, Major Pieton, Eweny Abbey, Bridgend
 Tyler, John Hawkins, Tytherington, Falfield, Gloucester
 Vachell, Edwin, Penarth, Cardiff
 Wallace, Henry, Trench Hall, Gateshead
 Williams, Lewis, Redwick House, Chepstow
 Wilson, J., Larkham, Kimbolton
 Wright, Frank, Hill Top Farm, Ashbourne
 Wyley, H. J., Bridgnorth.

FINANCES.—Colonel Kingscote, M.P., presented the report, from which it appeared that the secretary's receipts during the last two months had been examined by the committee, and by Messrs. Qulter, Ball, and Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on January 31 was £1,176 18s. 5d. The balance-sheet for the quarter ended December 31, 1871, and the statement of subscriptions and arrears, were laid upon the table; the amount of arrears then due being £1,151. Seventy-five members have given notice during the past year of their withdrawal from the Society.

JOURNAL.—Mr. Thompson (chairman) reported that the judges of the competing farms had all signified their acceptance of the appointment, and that arrangements had been made for the first tour of inspection to commence the last week in January. The committee recommended that 250 copies of the list of members be printed in a separate form, and sold at 6d. each. They referred it to the Council to decide whether the publication of the next Journal should be delayed, if necessary, for a few days, in order to admit of the publication of forms of guarantees of artificial manures and feeding-stuffs. This report was adopted, and the publication of the Journal was ordered to be deferred accordingly.

HOUSE.—Col. Kingscote, M.P., reported that the resolution passed in December last, respecting the retirement of the hall-porter, be carried out, and that he should receive a pension of £20 per annum, paid quarterly in advance. The committee further recommended that the secretary be requested to engage another porter, who should undertake, in addition to the present duties, the packing and posting of the Journal; and that his salary be £1 1s. per week, with clothes and other allowances as at present. This report was adopted, after some discussion, and the rejection, by 18 votes against 12, of an amendment moved by Col. Challoner, and seconded by Lord Tredegar, that the pension of the retiring porter be £25 per annum.

GENERAL, CARDIFF.—Lord Vernon (chairman) reported that the conditions under which the Marquis of Bute and Major Pieton Turbervill proposed to offer prizes for cottages, in connection with the Cardiff meeting, had been submitted to the committee. They recommended that an entrance fee of 10s. be paid by competitors; that plans and specifications should be sent in to the secretary by July 1; and that the secretary be authorised to advertise the competition in the usual papers, and in those that are connected with the building trade.—This report was adopted.

ELECTION.—Mr. Thompson (chairman) reported the recommendation of the committee that the Earl of Leicester be elected a member of Council, to fill the

vacancy caused by the election of Sir A. K. Maedonald as a trustee.—This report having been adopted, the Earl of Leicester was unanimously elected a member of the Council, on the motion of Mr. Thompson, seconded by Lord Tredegar.

SPECIAL COMMITTEE ON RECEIPTS AND EXPENDITURE.—Lord Vernon (chairman) reported that reports had been received from the implement, stock, prizes, and showyard contracts, committees, and from the honorary director, consulting engineers, and secretary. These reports had been ordered to be printed, and circulated amongst the members of the committee.—This report was adopted.

CHEMICAL.—Mr. W. Wells, M.P. (chairman), reported that the committee had drawn up forms of guarantees which vendors of manures and feeding stuffs can be invited to sign. These forms, when printed, will be sent to members of Council for consideration; and if approved of at the next Council meeting, it is suggested that they be issued on application, at a trifling charge to members of the Society.—This report was adopted.

STOCK PRIZES.—Mr. Milward (chairman) reported that letters had been read from several persons complaining of malpractices with regard to the exhibition of pigs, and that the committee recommended that the attention of the stewards and judges be called to this subject, and that any persons found guilty shall not be allowed to exhibit in future. The committee also recommended the following addition to the rules of the Cardiff prize-sheet: "No mare will be eligible for a prize unless certified, either at the date of entry, or between the date of entry and that of the show, to have had a living foal—or that the foal, if dead, was born at its proper time—in the year of the show. Or in the event of a mare being exhibited without a foal at foot, a certificate shall be given at the time of entry that she has been served, and the prize shall be withheld till a certificate be produced of her having produced a foal."—This report was adopted.

IMPLEMENT.—Colonel Challoner (chairman) reported that the committee recommended that the Secretary be instructed to ask, in the "Country Meeting Queries" for 1873, for not less than eighty acres of land, in such proportions of tillage as the Society may require.—This report was adopted.

VETERINARY.—Mr. Thompson reported that the Governors of the Veterinary College had not yet elected a Principal in the place of the late Professor Spouner, and that the committee were therefore unable to report further on the relations between the Society and the Royal Veterinary College. It was also reported that the committee had received a report from Professor Simonds on the subject of Hardon's Patent Cake, and lamb disease in Lincolnshire, and had recommended it for publication in the next *Journal*.—This report was adopted.

Letters were read from the authorities of Newcastle, Hull, and Darlington inviting the Society to hold its country meeting for 1873 in those localities; and from the authorities of York and Durham declining to invite the Society on this occasion. Mr. Thompson gave notice, that at the next monthly Council he would move "That towns competing for the country meetings of the Society be no longer required to send deputations to attend the monthly Council in May."

The prize-sheet of the International Exhibition of agricultural implements, machinery, &c., to be held at the Hague in September next, in celebration of the 25th anniversary of the institution of the Dutch Agricultural Society, was laid before the Council.

THE PROGRESS OF THE PLOUGH.

BY CUTHBERT W. JOHNSON, F.R.S.

The history of any agricultural operation is not only interesting but is attended with useful results. Take, for instance, the subject of this paper. When we examine the earliest notices of this implement, then made entirely of wood, and thus causing a very considerable waste of animal power, trace it forward until the days of the great modern implement makers, and still onward till the time when the locomotive is banishing animal power, are we not by such a retrospect well encouraged to expect still greater improvements in those modern locomotives? So that as steam is fast banishing the plough-horse, we may not despair of seeing his place occupied by the steam-engine for even the dung cart and the harvest waggon.

There is abundant evidence that the plough was employed by mankind at a very early period. It is true the first notices which have escaped to us are very slight—such as that in Palestine they ploughed with two oxen, and that their ploughs were constructed with a coulter and ploughshare. It is certain they needed the plough for their winter's fallow. Judging, however, by what we now witness in Syria and other Eastern countries, their ploughing was probably very shallow, and the plough animals poor, since it is certain that the ass, or even the goat, are still employed for this purpose on some of the light sandy soils of the East.

Then, again, the plough employed by the early cultivators was very rude; that of the Roman republic, in its shape, more resembled an anchor than a modern implement; and the same remark still applies to even the plough of India. In these cases the ground thus tilled could hardly have been more than scratched over. The Greek ploughs were of a better construction: they had wheels, a beam, a coulter, and two handles, somewhat resembling a modern wheel-plough; but these, from the shape of the stirrer, rather broke the soil than turned it over.

It is uncertain the shape of the early British ploughs. We are not aware whether they had wheels. We, however, learn from an ancient Saxon calendar, that our Saxon forefathers certainly made the implement with wheels; and from a rude sketch in another Saxon MS. we learn that they constructed some of their ploughs of a very rude shape, and even seem to have fastened their draught animals to this plough by their tails, a barbarous custom, which certainly was formerly practised in Ireland to such an extent that the legislature interfered in 1634, and declared, by the 11 and 12 Car. II., c. 15. entitled "An Act against plowing by the Tayle, and pulling the Wool off living Sheep," that "in many places of this kingdom there hath been a long time used a barbarous custome of ploughing, harrowing, drawing, and working with horses, mares, geldings, garrans, and colts by the taile, whereby (besides the cruelty used to the beasts) the breed of horses is much impaired in this kingdom. And also divers have and yet do use the like barbarous custome of pulling off the wool yearly from living sheep, instead of clipping or shearing of them." These wretched practices were then declared illegal, and to be punishable with fine and imprisonment. We may fairly conclude, however, from the few imperfect notices which have escaped to us that the cultivation of the early Britons was far better than is commonly supposed; and we must

not forget that our brave forefathers (who so gallantly met Cæsar even in the water, before he landed) are described by no friendly hand. Thus, when Cæsar arrived in England, about 55 B.C., he described the Cantii, or inhabitants of Kent, and the Belgæ, inhabiting the modern counties of Somerset, Wilts, and Hants, as much more advanced than the rest of the people in the habits of civilized life. They cultivated the soil; employed marl as manure; stored their corn unthrashed, and freed it from the chaff and bran only as their daily demands required. The interior inhabitants lived chiefly upon milk and flesh, being fed and clothed by the produce of their herds. "The country," adds Cæsar, "is well-peopled, and abounds in buildings resembling those of the Gauls, and they have a great abundance of cattle. They are not allowed to eat either the hen, the goose, or the hare; yet they take pleasure in breeding them." Cicero, in one of his letters, says: "There is not a scruple of money in the island, nor any hopes of booty, but in slaves"—a description that the industry and intelligence of succeeding ages has rendered singularly inapplicable.

When we find that the workmanship of the plough of our remote forefathers was rude and imperfect, this is not a matter of surprise; for among the early inhabitants of this country there were no artificers. The ploughman was also the ploughwright. It was a law of the early Britons that no one should guide a plough until he could make one; and that the driver should make the traces by which it was drawn of withs or twisted willow, a circumstance which affords an interpretation to many corrupt terms at present used by farming-men to distinguish the parts of the cart-harness. Thus the *womb withy* has degenerated into *wambye* or *wantye*; *wilken trees* into *whipping* or *whipple trees*; besides which we have the *tail withes* and some others still uncorrupted (*Leges Wallicæ*, 283—288). We read also that Easterwin, Abbot of Wearmouth, not only guided the plough and winnowed the corn grown on the abbey-lands, but also with his hammer forged the instruments of husbandry upon the anvil.

Then, with regard to the animals our ancestors employed in the plough, Lapenberg states in his "England under the Saxon Kings," translated by Thorpe, that "many horses were bred, every man being obliged to have two to his plough; hence, it is not surprising that the pirates of the north were so soon able to transform themselves into cavalry after their landing on the coast"; but as Mr. W. Skeat remarks, there are two instances in the Harleian manuscripts of a pair of oxen yoked to a plough. In the Bayeux Tapestry (A.D. about 1080) there is depicted a nondescript animal attached to a two-wheeled plough. It is clearly not a horse; but from its long ears it may perhaps have been intended for a mule, or it may after all have been a rude delineation of an ox, for the man walking by its side holds a goad. King Alfred, indeed, in his version of Orosius (who flourished in the fifth century) says, "Othare himself was among the first men of the land, though he had not more than twenty red cattle, twenty sheep, and twenty swine, and what little he ploughed he ploughed with horses."

The poet Chaucer seems to prove that the ploughman of the fourteenth century, though he might be possessed

of a single horse to use for riding, trusted to "cattle" for the purposes of husbandry. In the prologue to the *Canterbury Tales* we read of the ploughman :

His tithes paid he full faire and well,
Both of his proper swinke and his cattel,
In a tabard he rode upon a mare.

That horses, as well as oxen, were used in the plough in the Tudor days we learn from the earliest English agricultural writer. Although Fitzherbert, in his "*Boke of Husbandrye*" speaks in a manner that shows that even in his day plough horses were not generally employed, he observes, "a husbnde may not be without horses and mares, and specially if he goe with a horse plough." And a few years afterwards Bishop Latimer, in a sermon preached before the king, thus earnestly spoke in favour of the little farmers of his time, and alluded to their plough horses: "Let them," said the martyr bishop, "have sufficient to maintain them, and to find them in necessaries. A plough land must have sheep to dung their ground for bearing corn; they must have swine for their food to make their bacon of; their bacon is their venison, it is their necessary food to feed on, which they may not lack; they must have other cattle, as horses to draw their plough, and for carriage of things to the markets, and kine for their milk and cheese, which they must live upon, and pay their rents."

When Heresbach wrote (A.D. 1570), it was not uncommon in some of the warmer parts of Germany and Italy to plough during the night, "that the moisture and fatness of the ground may remain shadowed under the clodde, and that the cattell through overmuch heate of the sunne be not diseased or hurt." Worlidge, in his "*Mystery of Husbandry*," describes very clearly the first rude attempt to construct a subsoil plough: he tells (p. 230) "of an ingenious young man of Kent, who had two ploughs fastened together very firmly, by the which he ploughed two furrows at once, one under another, and so stirred up the land twelve or fourteen inches deep. It only loosened and lightened the land to that depth, but doth not bury the upper crust of the ground so deep as is usually done by digging."

Jethro Tull, more than a century since (A.D. 1735), paid considerable attention to the plough; he had even searched into the early history of this implement, and concluded that it was "found out by accident, and that the first tillers (or plowers) of the ground were hogs." The ploughs which he describes, and of which he gives drawings, were evidently (although still rudely and heavily constructed) superior in several respects to all that had preceded them. In fact, as is well remarked by my friend Mr. J. Allan Ransome, in his valuable work on the implements of agriculture, for ages the plough was little more than a rude, clumsy instrument, which served only to rake the surface, instead of making furrows in the land sufficiently deep for the seeds to be buried. It was not brought to anything like a perfect tool for the purposes required till the close of the seventeenth century.

The Dutch were amongst the first who brought the plough a little into shape, and by some means or other the improved Dutch plough found its way into the northern parts of England and Scotland. Those who have traced the history of the plough agree that one made by Joseph Foljambe, at Rotherham, and for which plough a patent was obtained in the year 1730, was the most perfect implement then in use; and to this day it is well known by the name of the Rotherham plough. This plough was constructed chiefly of wood; the draught-irons, share, and coulter, with the additional plating of iron to the mould-board and sole, being the only parts

Mention must also now be made of a step in the march of improvements by the ingenious and justly celebrated James Small, a Scotchman. He constructed a plough on true mechanical principles, and was the first inventor of the cast-iron turn-furrow, commonly called the mould-board; and, although more than a century has since passed, Small's plough may, in most respects, be referred to as a standard for the elements of plough-making. James Small established his manufactory of ploughs and other agricultural implements at Black Adder Mount, in Berwickshire, in the year 1763, and died about thirty years afterwards, having devoted the best part of his life to the furtherance of pursuits connected with agriculture.

It is difficult to follow the very gradual improvements which took place in the manufacture of the plough from the death of Small until the time when, in 1785, the late Robert Ransome of Ipswich began to employ cast-iron instead of wrought in its construction. Still more difficult is it to award the due meed of praise to the producers of such modern ploughs as those of the Ransomes, the Howards, and a host of other great makers. Of the steam plough, whose introduction has been so recent, and its progress so rapid, it is almost needless to speak. But there is a growing expectation that the time will come when the steam locomotive will travel with the load it propels. By this means it will be able to accomplish nearly all the work of the farm. This would seem to be shadowed forth by the terms of the prizes offered by the Royal Agricultural Society at the Wolverhampton meeting, and it is evidently the opinion of Messrs. Bramwell and Amos. In the excellent report of the engineers of the trials of the traction-engines exhibited at that great meeting they observe: "There appears no valid reason why locomotive engines should not be made suitable for moving agricultural machinery, whether thrashing, ploughing by means of windlasses, or for other purposes for which the farmer requires motive power; and it was with the view of encouraging the manufacture of such engines that the Society determined this year to offer a prize, not for a mere locomotive, but for 'the best agricultural locomotive engine applicable to the ordinary requirements of farming.' It may be as well to say a few words upon the history of common-road locomotion. It is now nearly forty years since Gurney (and there were probably others before him) exhibited his common-road steamer as a competitor with the stage-coach of the period. He was speedily followed by Ogle and Summers, by Maceroni, by Russell (whose engine, however, threw great discredit on the cause in consequence of its exploding), by Sir Charles Dance, and by Walter Hancock. It was this latter gentleman who from about 1825 to 1835, did more than any of his predecessors or competitors to show the feasibility of using steam-power as a means of propulsion on common roads at higher speeds than those attainable by the best stage-coaches. For many months together his steam-carriages, competent to carry from 15 to 20 passengers, travelled regularly from the Bank to Paddington and back at the ordinary sixpenny fares then charged by the omnibuses, and besides the Paddington journey he very commonly used to come out from and return to his factory at Stratford, his carriages passing through Whitechapel, Leadenhall-street, Cornhill, and the busiest parts of the City of London. In his steam-coaches he exhibited a very large amount of ingenuity and of engineering knowledge. The boilers and engines he manufactured would compare favourably with the best productions of the present day—a great thing to say of a man who worked 35 or 40 years ago, when high-pressure light engines were so much less understood than they are now."

From such a retrospective glance at the improvements

which have so slowly, yet so steadily taken place in the plough, we may well be encouraged to hope for still greater advances. When we note how rude was the original implement, how iron was slowly introduced in the construction, how it was first worked by the ox, and after-

wards by the horse, and that now the steam engine is fast superseding both, we may well feel assured, that by further improvements in the locomotive, much deeper and better ploughing will hereafter be accomplished than any we have yet witnessed.

MAIDSTONE FARMERS' CLUB.

PARASITIC DISEASES IN ANIMALS.

At the first meeting, held at the Star Hotel, Professor Brown, M.R.C.V.S., delivered a lecture on "Parasitic Diseases: worm in the throat of lambs, flukes in the liver, hydatids in the brain." Mr. T. Bridgland, jun., in the chair. Several additional members having been elected, the Chairman introduced the lecturer.

Professor BROWN said there was no doubt that the parasites were charged with doing a great deal of mischief of which they were perfectly innocent. They all knew if they had an animal in bad condition, with a rough, ragged coat and a voracious appetite, taking a large quantity of food, and apparently did it no good, the common explanation was that it was subject to worms, and, if a beast died from an obscure disease and it was found on *post mortem* examination that there were parasites, the cause of death was at once attributed to these animals which were residing in the interior. It was not possible to deny that in certain instances parasites do very considerable mischief, but there were many cases indeed in which they really do no harm at all. It was common enough in dissecting the body of an ox, a horse, or even a wild animal, to find numbers of parasites inhabiting various organs, but the location is very various, sometimes in the muscles, sometimes in the animal's brain, where their mere presence is necessarily injurious, sometimes in the intestines of the stomach, frequently in the liver, lungs, and kidneys, and sometimes in the skin, and indeed it may be stated generally that there is not a tissue, and certainly not an organ which is entirely exempt from them. Where parasites are present in the organ most necessary to the life of the animal, of course they do the most mischief. The most dangerous parasite is that in the brain, next those residing in the lungs, and next those which attack the liver, where they act injuriously by interfering with an important part of the digestive process. In other parts they remain for a considerable period, possibly for the life of the animal. In the life and history of the parasitic organism, there are many points which attract attention. The parent worms do not necessarily produce progeny that resembles themselves, which was a circumstance lost sight of for a great many years, and it was not until 1842 that a Danish naturalist discovered what is known as alternative generation, *i.e.*, that certain animals being themselves perfect in their organization, produce eggs in the ordinary way, but instead of certain embryos coming from those eggs like their parent, other animals quite different from the parent are the result, in some instances passing through five or six transitions, as in the fluke family. Commencing with the fluke worm, which was perfectly familiar to most of them, he said there were very sheepbreeders who have not had some opportunities of studying the worm in its site, and learning some of the effects which it produces in the organism. The flukes have been known for a great many years, in fact could hardly be traced back to their origin. They are found in deer, in the ass, in cattle particularly foreign cattle; and in the beasts of the Zoological

Gardens, different varieties are found, but as far as they knew the sheep is the only animal which suffers very considerably from them. Cattle never suffer from them, for he had met with them in the slaughter-houses in the livers of fat bullocks, but had never been able to associate with their presence any deranged condition of the animal, and the same is the case with the deer and wild animals. In the sheep, however, there can be no question that the flukes either produce the mischief themselves, or the circumstances under which they occur are injurious in their effects. The fluke worm occurs principally in low, damp situations, marshy lands, generally where there are large numbers of fresh-water snails. The animal is bisexual, that is, every individual fluke is both male and female, and has the horns of both sexes in its body. In all animals there is an immense number of eggs, which are thrown off and carried into the intestines, and from the intestines are thrown out in large numbers with the manure, and from this it is easy to understand the succeeding stages. In lands which are very high and dry with the sun shining upon them the greater part of the year, in what they called parched-up pastures, they were quite safe against attacks of rot, and also on land near the sea, where the earth is impregnated with salt, for salt is very unfavourable to the development of the embryo, but in lands where there is fresh water, there they had the conditions under which the embryo flourishes. It seems that the last stage of the fluke-worm development is where it becomes parasitic to the liver of the snail, and the cause of the affection of the sheep is the swallowing of those small snails, the liver becomes diseased, and the animal at first gains fat, apparently from the stimulus which is given to the liver in the first instance, then the animal begins to fall away, there is a shrinking of the muscles, the formation of the bag, as the shepherd calls it, under the throat, a general derangement of the condition, eventually terminating, unless something is done to prevent it, in the animal's death. Having pointed out that the land most favourable to the rot is also unfavourable to the development of healthy, nutritious herbage, which combined to render the sheep debilitated, he said the method of treatment was not difficult to suggest, but should be adopted before the mischief was done. It is clear that to prevent sheep rot they must be kept out of marshy places; but in certain localities it was not easy to do so, for they picked it up as they were being driven from one fold to another. Under all circumstances, however, it was possible to prevent sheep being driven along those dangerous places where the rank grass flourishes, and if the shepherd were aware of the danger he would take more care to prevent it. A man can never find out by fifty years' observation what parts of the land are favourable to the production of the fluke, and they could not expect that he should know this, but they could prevent the sheep from feeding on marshy places, and put them on grounds which are well drained, as all well farmed land

out to be, and see under no circumstances in those seasons when they fear an outbreak of rot that the animal falls away in condition, for they must either supply it with artificial food or take the risk. In the majority of cases it was quite possible, by keeping up the animal's condition, by supplying it with artificial food, keeping it out of suspicious places, and by adding to its food a certain amount of salt periodically, to prevent the animal from being affected with the fluke or any other parasite. After the disease has broken out it is desirable to keep them under cover, and find them dry food, but if that plan cannot be adopted the best plan would be to supply the sheep with a proportion of good hay while feeding upon damp pastures, so as to keep them from any of the objectionable herbage if possible. When it is fully developed no treatment is of the slightest use, and unless the animal can be removed to some high and dry situation nothing can be done; it does not matter how poor it is, so that the animal may have to work to get its food. Passing on to the second part of his subject he said the hydatid was known to the earliest writers, many years before the speculations as to the animal nature of the parasite arose, and the white spots which are to be seen upon it were attributed to a blow on the head, but after a time it began to be suspected it was really an animal. Mr. Hewitt first, and others, came very nearly to the truth, but it was not till 1852 that a German pathologist made the discovery that those elaters were mere tapeworms, and that the water bladder found in the intestines of the sheep, and frequently on the brain, is derived from the eggs of the tapeworm. But then the question arose how the eggs of the tapeworm were swallowed by the sheep, and this was, no doubt, caused by their having been dropped by a dog going over the ground, as the intestines of that animal contain several species of tapeworm. The changes are not complex. First, there is the hydatid, which is a water bladder having a tapeworm head, and this hydatid is swallowed by another animal, the tapeworm passes into the intestines, the joints grow one by one, when the last segment fills off, a perfect animal itself. The segment having fallen to the ground, is taken up by another animal, and instead of producing another tapeworm, the eggs or embryos bore their way through the structures, and ultimately reach the animal's brain, always going in a fixed direction to the brain of a sheep and the liver of a dog. The origin of the hydatid is in all probability the shepherd's dog; of course the fact of not keeping a dog does not prevent it entirely, for any stray dog might run over the farm, and if one dog only dropped a few segments of the tapeworm, the mischief is done. Of course the great security they had lies in the fact that an immense number of embryos are burnt up by the sun, crushed out of existence, before being swallowed by the sheep, or else from the number of dogs, and from the number of tapeworms in their intestines, the evil would spread over the whole country. He instanced a case on Salisbury Plain in 1852, where a singular fatality occurred amongst the sheep, nearly all being lost out of a flock of two hundred; it was on that particular spot that the owner was in the habit of exercising his greyhounds. The prevention of hydatid in the brain is perfectly easy where a dog is kept on the farm, the best plan being to give periodical doses which expel the worms; the common beetle-nut is a most deadly enemy to all the tapeworm family, and two or three drachms of this grated up and mixed with the animal's food, now and then, will render the sheep perfectly free from the tapeworm. The best treatment of giddy sheep is the immediate consignment of it to the butcher, and he showed that all the methods proposed for the extrication of the hydatid are useless, as if it is extracted it does not prevent the hydatid growing again, and another might form almost directly. The subject of the threadworm, which is most important, he said he left it to the last. The embryo is a very small one, and from it lambs have suffered more severely than calves. After mentioning the symptoms that indicate this parasite, he stated that when the lamb dies, the little worms are found accumulated in large masses in the tubes of the lungs, and the animal's death is caused by partial suffocation, and general debility. Under these circumstances it is not of the greatest importance to ascertain the cause or origin of the parasite, but to devise some means for its expulsion. Old sheep are affected with it as well as lambs, but in the former case they do not suffer so much, though they are

capable of infecting the pastures to a considerable extent, and if the embryo finds favourable conditions, the damage is great. Here they found moist seasons most favourable. So long as they have the eggs thrown out by the older sheep, so long must they expect the lambs passing over that land will take up an abundant quantity of the embryo. The eggs which these worms contain in the embryo, do not effect the sheep which take them up. If they were passing a flock of adult sheep over a piece of pasture, it might be assumed they drop an immense number of eggs over that pasture. If they took directly a number of young sheep over the land it does not result that they are affected, showing that in the condition they then are they are capable of affecting any animal which may take them up, but it seems, as in those transitions which occur in the fluke family, in the hydatid family some changes of a similar kind must take place in the embryo of the round worm before it is rendered dangerous. The Royal Agricultural Society has given Professor Simonds instructions to examine into the subject, and the inquiry is now going on, but nothing material can be discovered, more than what is at present known, as to the means of abating the progress of the disease. It is known that it is the embryo that is dropped one season by the old sheep which affect the lambs of the next season, and, therefore, although they could not state minutely every process, they were safe in concluding, that one of the most important means of prevention is to keep off young sheep from the lands which have been fed upon by older ones. If this were done throughout the country the loss would not altogether cease, but would become so materially lessened as to be no longer a matter of serious consequence, as at present. The next step in the way of prevention would be to treat the lands which had been fed over by the older sheep, and, for this purpose, lime and salt may be used, both being destructive to the germ of this parasite, and a topdressing of lime and salt will do good to the land, as well as destroy the parasites. The treatment of diseased animals is quite a separate question, and requires a great deal of care and attention the fact being that there are no means of directly destroying this parasite in the body of the animal without doing the animal a great deal of damage, and consequently all the remedies which are devised must act indirectly to be effectual. Small doses of turpentine frequently administered, and spirit of turpentine mixed with the yolk of eggs or a little glycerine, is an efficacious agent, but the best way of destroying it is by applying some irritating gas, such as chlorine gas (very easily produced), sulphurous acid gas, or carbonic acid gas. The grand secret in the treatment of all parasitic diseases was that the animals should be kept in good condition.

The CHAIRMAN asked if sheep known to be affected with fluke are removed to high and dry land where rot was never known to exist they would recover, if never taken back again. They had had discussions upon the matter at the Club, and there were various opinions upon it. Then again whether sheep were attacked by the fluke in passing swampy places by the roadside. And third, if they took some perfectly sound sheep and put them upon a newly-made pasture, such as ryegrass on a sewage farm, where it had been dry land, whether they would get the rot. As the sewage question was an important one to the town of Maidstone, they would be glad of information on the subject.

Mr. PLOMLEY said that generally the rot developed itself in badly drained fields, where the water had been stagnant for some time, and occurred not more than once in 15 or 16 years. He thought they would be liable to it this spring, in consequence of the wet season.

Mr. R. WATERMAN said that at Tenterden about twelve years ago, he saw many of the flukes, and many of the farmers in the district sold their sheep at low prices to the butcher. He kept his flock through, however, and bred lambs from them and he should advise anyone instead of having them killed to keep them, and feed them as well as they are able, for if they were killed they only fetched about ten shillings each, while others which brought up their lambs were worth 30s. or 40s.

Mr. FANCETT asked if the fluke could be taken up from the excrement of rabbits by the sheep when passing near the burrows?

Mr. STONHAM said having lost 16 calves by parasitic disease, he entirely endorsed the opinion of Professor Brown that preventive measures were nearly the only measures that

can be taken with any chance of success. When one was buying stock, he could not anticipate the evil, for very likely the germ might be laid, and the only way he could see was to buy at such a price as to make the living pay for the dead. He bought 68 Irish calves in two lots in the middle of the summer, one in July and the other in August. The first lot, numbering 36, was put on clean pasture, and he did not lose one, and of the next lot he bought he lost 16. He called in a veterinary surgeon, and discovered that they were infected with round worm, a number of the creatures as large round as a pipe being taken out of the bronchial tubes. He thought he could see his way to prevent that occurring for the future, for if he bought another lot of calves like that, he should begin with oilcake directly he got them home. Those he had saved were doing as well as they could do, taking down seven pounds of cake per day. One question arising out of the lecture he considered very important—Are those old pastures so valuable as it is generally thought they are? and he hoped that question would come on for discussion at some future meeting. The question is whether they are not a nuisance, whether they should not introduce a system of alternative farming and do away with these pastures.

Professor BROWN replied. The result of his observation was that when sheep affected with the rot were removed to high and dry ground, they had every chance of recovery, especially if they were obliged, in consequence of the scarcity of food, to take plenty of exercise. The result of this plan of management was that a large number of the flukes die off naturally, and the animal being placed in a position where it gets no new supply, the quantity diminished week by week, and at last the whole of them, or nearly the whole of them, are entirely removed. The whole question, however, depended upon the duration of the disease, but if as soon as they found the disease out they had them thus removed, he had no doubt the larger proportion of them would recover, and might be used again. With reference to the probability of animals picking up the disease by the roadside—he meant in those green lanes which frequently connected two parts of the farm—when the greater part of the farm was dry land, in some of the low parts of the green lanes running to the homestead the sheep were frequently driven, and it was there that the disease was caught. The question referring to sewage land was rather a difficult one to deal with. His own impression was there would be no risk whatever in feeding sheep on rye-grass on sewage farms as far as the rot is concerned, but it would be hazardous on another account—that of splenic apoplexy, which occurred in all those lands where there was an abundant quantity of manure, either liquid or solid spread. The question as to danger of rabbits running over ground and depositing their excrement, he could answer distinctly in the negative, for unless the dogs in the neighbourhood actually kill and eat the rabbits, there is not the slightest chance of the sheep taking the rot or hydatid on the brain. There was no question rabbits were subject to a species of worm, but not that which caused either of those diseases. With regard to the worm in the throat of calves, he said they must first get infected animals, or their land could never be rendered dangerous; and, in conclusion, he referred to the question of the old moist pastures, advocating their abolition, as they tend more than anything to spread the disease, and the inferior quality of the herbage tends to weaken the sheep.

The CHAIRMAN then proposed a vote of thanks to Professor Brown, who, in reply, suggested that the farmers should keep a book in which to note down facts which came under their notice, which would materially assist scientific men in pursuing their inquiries.

The following is the programme of the Maidstone Club for the year: Feb. 8—Professor Brown, M.R.C.V.S., on Parasitic Diseases, Worm in the Throat of Lambs, Flukes in the Liver, Hydatids in the Brain; Feb. 29—Dr. Monckton on The Labourer and his Relation to Agriculture; March 28—Mr. J. Bailey Denton, C.E., on Under Drainage, and the Steps to be Taken to Develop and Maintain its Effects; April 25—Mr. Henry Corbet on A Model Agreement; May 30—Mr. R. L. Everett on Suffolk Farming; June 26—Excursion to the Sewage Farm at Bishop Stortford; July 25—The Utilization of Sewage, and Mr. J. Rock on the A. B. C. System; Oct. 3—Professor Buckman on Results of Seven Years' Practical Farming of a Man of Science; Nov. 7—Mr. Henry Woods on Sheep Farming.

A "FAST AND LOOSE" COMMITTEE.—At Wigton County Court, before T. H. Ingham, Esq., judge, an action was brought by Mr. Henry Railton, of Snittlegarth, against Mr. John Brown, of Wiggonby, farmer, and Mr. Thomas McMechan, of Wigton, bookseller, late secretaries of the Wigton Agricultural Society; Mr. John Gate, of Wigton, spirit merchant; and Mr. John Jackson Mitchell, of Wigton, guano merchant, two of the committee of the said society; to recover £5 5s., the value of a second prize given by Mr. George Moore, for the best mare or gelding, four years old or upwards, exhibited at the show of the Wigton Agricultural Society, held at Wigton on the 13th September, 1871. The first prize was awarded to Mr. Fearon's Romeo, which had been purchased at Liverpool by the exhibitor. According to the rules of the Wigton Society, entries were to be made before the 5th September. Romeo was still unpurchased at 5:50 p.m. on the 5th, and the entry was not sent until the 6th. On the day of the show Mr. Railton protested against Romeo, and the committee considered the protest on the 3rd October, when a motion was carried by 7 to 6 to the effect "that Mr. Fearon do not receive the prize." Subsequently, however, Mr. Fearon threatened the committee with proceedings to recover the money, and the former resolution was rescinded. Mr. Railton, whose horse was placed third (Mr. Percy's being second), now claimed the second prize, upon the ground that Mr. Fearon's horse being disqualified the next in order of merit would take his place, and Mr. Railton would be raised from third to second. The plaintiff, in cross-examination by Mr. Hough (who appeared for the defendants), said that he had been a member of the committee, and that it had been the practice to receive entries after the advertised date.—Mr. Hough said the rule fixing a date for receiving entries was made for the benefit and convenience of the committee to make arrangements for the show. It was a rule they could dispense with at any time.—His Honour: It is a pity they should play fast and loose with it. Strictly speaking, no entry should have been taken after the 5th; but this rule has been invariably set aside with Mr. Railton's knowledge.—To Mr. G. Carrick (who appeared for the plaintiff): How do you come to claim the second prize?—Mr. Carrick: Mr. Fearon being debarred, then Mr. Percy takes the first prize, and we take the second.—His Honour: Does it follow that if A B C gets first, second, and third prizes, that if A is ousted, B steps into A's place, and C into B's? Mr. Railton never had the second prize awarded.—Mr. Carrick: He will, as a matter of course, if—His Honour: Where is the matter of course? I very much doubt it.—Mr. Carrick: I must contend that the rule must be adhered to.—His Honour: You have no power to vary it. It is a most important rule.—His Honour: Yes, it is a very important rule; but then you see it has been set aside over and over again. Mr. Railton must try to settle it with the committee.—You have got all wrong, now get all right. There was a great desire, he knew, to have as large an entry as possible, and they had had the benefit of seeing as fine a horse as ever he saw in his life, he thought. Now try to settle it with the committee.—Plaintiff: They won't settle it with me properly.—His Honour: I dare say they'll admit they have not done right.—Mr. Hough: I quite admit that Mr. Railton and the other members of the committee have acted badly in varying the rule.—His Honour: If Mr. Fearon had brought an action the committee could not have resisted paying after accepting the nomination. They would have had no defence.—Mr. Hough: Certainly not. He might have sued Mr. Railton as one of the committee.—Mr. Carrick asked his Honour to grant a case.—His Honour: I'll adjourn it for these gentlemen to settle.

THE ROYAL AGRICULTURAL BENEVOLENT INSTITUTION.—At the monthly meeting of the Council on Tuesday, February 6th, present, the Marquis of Huntly, in the chair, Mr. Baldwin, Mr. Battcock, Mr. Brown, Mr. Cantrell, Mr. Collins, Mr. Garrett, Mr. Naish, and Mr. Shaw, it was agreed that at the forthcoming election 33 names be added to the present list of pensioners, viz., 8 male, 15 female, and 10 married candidates, thus raising the total number of pensioners to nearly 300.

THE ROYAL SHOW AT CARDIFF.—Mr. Jacob Wilson will again act as a steward of stock in the place of the President, Sir Watkin Wynn; and Mr. Robert Leeds, the new stock steward, will be in the horse ring, a section to which he has already given his assistance at Oxford and Wolverhampton.

THE FARM LABOURERS' MOVEMENT.

If we remember aright one of the speakers at a recent meeting of a Chamber of Agriculture objected to any discussion over the condition of the labourer as especially inopportune; the protest being emphasised by the fact of this being made in a district where the men are "moving." To us, on the contrary, nothing would seem more politic than the consideration of the claims advanced should be taken at the outset, or, perhaps, more particularly at a comparatively idle time. We have seen men half-mad with drink "strike" on the rick in the very middle of harvest, when every hour or minute was a matter of anxious reckoning to the farmer, while the difficulties attendant on the last in-gathering must be fresh in the recollections of all. Let master and man then, if possible, adjust their differences at once, or at any rate let us not imagine that we can stifle such an agitation by affecting not to give it any attention.

So far as the Agricultural Labourer be concerned the question at issue is by no means confined to an increase of wages; but there are a number of collateral points to which the employer might with advantage give some study. A working man publicly stated in Shropshire the other day that he received eleven shillings a week, and that he paid five pounds a year for his cottage. A labourer in Leicestershire said the other day, that he had seen milk thrown to the pigs, a little of which he would have been glad to take home to his family. Others continually complain that if they are suffered to cultivate a bit of garden ground they have to pay a much higher rent than the farmer does for his land. Further than this, it is contended that there is little or no incentive for a good capable craftsman doing his best, but that he must be content to abide by the "regular" pay of those parts. Now, surely it would be well if such grievances as these were made the subject, not so much of general, as of individual inquiry; let, in a word, every employer make them "personal" to himself. On the common run of a labourer's wages is it fair that he should be called upon to pay as much as five pounds a year for the common run of cottage placed at his disposal? It may be said, in answer, that this, on the face of it, is an exorbitant rate; but still this has been spoken to without contradiction in certain districts, and in these districts the people are "rising." Again, though nothing can have a worse effect than giving a man a bit of allotment ground, it is manifestly unjust that he should have to pay more for this than the rent at which it is let to richer men. Nothing could, on the face of it, have a greater tendency to make men dissatisfied with the terms upon which they are treated; and it is alike the duty of landowners and occupiers to ascertain, each one for himself, the rents which the working man has to pay for his house and his garden ground. It is, moreover, occasionally stated at these labourers' meetings that the bit of ground is often denied a man, whereas there is no better aid than this or no better employment for his leisure hour.

In his excellent paper in the Royal Agricultural Society's *Journal* Mr. Dent brings the strongest testimony to the advantage of insuring to the labourer and his family a plentiful supply of milk, either by setting him up with a cow, or by the farmer providing this from his own dairy. Nearly all this evidence, however, comes from the North. "Excepting at the annual hiring," says Mr. Cully, speaking of the comparative prosperity of the Northumberland labourer, "he hardly knows what a beer-shop means, and his children suck at the milk-bowl instead of himself at the beer-jug." Here is another home question for the farmers of the Southern and Western counties. Would it not be as cheap in the end to supply labourers with milk

at the very lowest price, as throwing it all to the pigs, or sending it up, still at the lowest possible rate, to some London contractor? We doubt much whether the plan of each cottager keeping his own cow could be generally carried out, but we have no doubt whatever as to the mutual advantage of a regular supply of good fresh milk for the family, as this with bread is, for rich or poor, the companion staff of life. And here the labourer himself is not altogether without blame. Strongly as he may speak of his hardships, of the little his family has to live upon, he is manifestly reluctant to forego his "privileges," or his so many quarts of cider a day. If he will have wages in kind it would be less selfish and more profitable were he to exchange the cider for milk. And, again, the farmer must inquire of himself as to how this would suit his case? If cutting off the small cider would be at any temporary sacrifice to himself? In any ease he must be prepared to make it, as milk is almost the only payment in kind we would admit of, and then at little more than a nominal rate.

At the last labourers' meeting in Shropshire Mr. Strange, the Secretary and lever of the Society, quoted the admirable remarks made some years back by Mr. Charles Howard, at the Farmers' Club, on the advantage to everybody concerned of piecework. Mr. Howard, beyond showing how much such a system does for the farmer, said that "regulating wages by the quantity and quality of the work performed, is an incentive to industry, and affords greater scope for the exercise of skill, thereby giving the industrious and skilful man his legitimate advantage over the lazy and indifferent." And here, no question, is one of the weak places in the case of the "industrious and skilful" agricultural labourer. Once a ploughman always a ploughman, at precisely the same rate of wages; whereas in a manufactory the same man would have the opportunity of gradually rising from one rank to another in the establishment. In fact, almost the only opportunity of the rural labourer is piecework; and yet Mr. Sewell Read told the members of the Farmers' Club in only November last that "task-work is not gaining ground, but is rather losing it in agriculture." Not because the men dislike it, but because the farmers do not like to incur the trouble, or are, more positively, unequal to or uneducated in this branch of their business. Another home question arises here, and one which on the labourer's own pleading, must be answered.

There is hardly a man of any experience who writes upon Emigration but who couples what he has to say with a caution against people in any class of life hastily engaging in such a speculation. A suggestive incident, however, occurred at the recent gathering of the labourers in Shropshire, which we give in the words of the report: "We learn that before the meeting dispersed several labourers were engaged to go into Staffordshire and elsewhere, at considerably higher wages than they have hitherto received." And at Branton, in Lincolnshire, one of the speakers said in reply to a suggestion that each man should make an appeal to his employer: "I'd no chance to ask my mester, for he came to me on Saturday and said he shouldn't want me any more, so I thank'd him and went about my business. He thowt he was going to starve me, but I begun work this morning at another place at three shillings a day, instead of half-a-crown." It is but right to say that the movement is by no means confined to the "poorer districts," as they may be termed, but that the meetings appear to be more general and the tone more determined in Lincolnshire than elsewhere.

LAND TENURE.

At a meeting of the Warwickshire Chamber of Agriculture, at Warwick, Mr. T. HORLEY, jun., of The Fosse, read the following paper:

I have undertaken to introduce this subject from the conviction that it is of national importance, and a feeling has been increasing in my mind for years that many of the restrictions and remains of feudalism that exist in the shape of farm agreements and customs in many parts of this kingdom are not only a sure hindrance to the progress of British agriculture, and prevent the proper cultivation of the soil, but are also contrary to the spirit of the age in which we live, and will be looked upon in after years with astonishment that they could have held their sway so long, when it had been generally admitted that they were a great clog upon agriculture, and one main cause which has prevented that free flow of capital to the cultivation of the soil, which in a thickly populated country like this is so desirable. I say it is nothing but the necessity for the consideration of this subject, and the hope that we may (from the calm and deliberate discussion which I trust will take place to-day) set people to think on these matters, and, if so, I do not doubt great good will result, prejudice will be wiped away, and both landlords and tenants will see the desirability of some general system which, while it protects the owner of the soil, will secure for the capital invested in its cultivation and improvement greater liberty, and make it a safe investment. There will, I know, be great diversity of opinion as to how this can be best secured, but I think it will be generally admitted that the rapid changes and progress of British agriculture—from the days when, comparatively, only a small portion, and that the best of the soil, was occupied as tillage, and when at most the capital of the occupier consisted of a few rude implements and a little stock which was seldom housed or protected from the weather—have not secured to this branch of our national industry a thorough security for the capital employed. No doubt all advanced minds will favour leases; others, considering the difficulties in many cases, advocate yearly tenancy with compensation for unexhausted improvements. I will not enter into their comparative merits; but I believe one opinion has been universally growing of late years among all classes connected with the land of this country, landlords, agents, and occupiers, namely, that nothing less than twelve months' notice to quit could fairly exist. I cannot but think that a system of compensation for unexhausted improvements must greatly extend, and I trust become universal, whether land be held upon lease or from year to year, because it must ultimately tend to materially improve, and consequently raise the value of the land, offer a premium on good farming and high cultivation, and prevent landlords from being called upon, whenever a change of tenancy takes place, to make a large outlay to put the farm into a fair state or condition for entry. I know some persons think it better to spend their own money than to pay a sum to their predecessors for what they have left behind; but the majority of people capable of judging know well that it is better to be able to obtain a good harvest and keep a good amount of stock on a farm the first year of entry than to spend two or three years in bringing the occupation up to a fair standard of cultivation. I will not plead either for leases or yearly tenancies; my object is rather to seek for greater liberty in cultivation, whether the hiring be for a term of years or from year to year. We want to break the spell and charm of these old stereotyped covenants and conditions, which have placed innumerable hindrances in the way of agricultural progress, and we shall thus be conferring a boon alike upon owners and occupiers, and upon the country at large. The great amount of capital that is now necessary for the thorough cultivation of the soil and the production of the greatest amount of crop that can be raised from it without any exhaustion of its fertility, renders it necessary that there should be a removal of all useless restrictions and a thorough revision of existing agreements between landlords and tenants. The attention that is being given to this subject by thinking minds

from one end of the kingdom to the other, from the first nobles and legislators to the tenant-farmers, cannot have escaped your observation. I may adduce, amongst a few examples, Lord Derby's speech at Liverpool, where he said, "After making allowance for the picturesque and other tastes, which all desire to see more and more extended; the fact still remains, that we do not get, as yet, out of English earth, one half what we probably might do with advantage, if all our present resources were brought to bear on the soil; and I will add, if this work of agricultural improvement is to be carried on as it should be, it is the landlord quite as much as the tenant who must put his shoulder to the wheel. I believe what is wanted from the landlord is much less that he should put a large amount of capital of his own on the soil than that he should offer no obstacle to its being put on by the tenant. Security is the first requisite, and I hold that any tenant good enough to be kept permanently on the land ought to have a lease if he wants one, and the conditions of letting should be few and simple." The Earl of Leicester (whose estate generally may be looked upon as an example of high farming), speaking at Dorking, the other day, said: "I will ask you, have we in a favourable season on this description of soil obtained the greatest possible return at the least possible cost? Since I last met you, I have travelled much through England and Scotland, and taking into consideration the whole of the land I have seen under cultivation I think I may safely state that the produce of it might be nearly doubled under a perfect system of agriculture. I have observed a want of skill and capital on the part of the occupier, and an apparent want of assistance and encouragement on the part of the owner. The buildings were bad and inconvenient; the fields too small and ill arranged, and too often covered with useless timber. I do not believe agriculture will ever attract that capital, that skill, and that energy, which are requisite to bring it to perfection, until ample security is given in the form of a lease to the occupier, and from that lease many unnecessary restrictions (which exist in 99 cases out of 100) are omitted. I found in a lease in use on my estate there were many restrictions such as I should not like to be bound by were I a tenant. I have, therefore, with the assistance of my agents and my tenants, deviated from the beaten track, and endeavoured to form a lease more in accordance with the spirit of the age, avoiding all interference with the capital of the tenant, removing all clauses that dictate as to the cropping of the land, or the sale of the produce, and, as far as I can, giving him security for his capital invested. I have endeavoured to place my tenants in that position which I should like to hold as an occupier of land, and in doing so I am satisfied I have studied my own interest as well." Sir J. Trelawney, M.P., speaking in Cornwall on the subject, said: "A tenant wanted something to make him look upon the land as that in which he was permanently interested." Col. Corbett, M.P., at Ludlow, said: "The question of the tenure of land was a difficult one, but had been solved in some parts of England by an arrangement in the lease or agreement, by which allowances were made on either side, on the part of the out-going and in-coming tenants for crops and unexhausted improvements. There were other means of solving the problem; and he quite agreed that under any circumstances a man could not be expected to lay out his capital without a fair prospect of obtaining a return for his money." At Stowmarket, Col. Wilson said, in reference to the growth of beet-root for the purposes of distillation: "It stood to reason that whatever was for the interest of the tenant, so long as it did not injure the land, must in the long run be profitable to the landlord." Mr. C. S. Read, M.P., at Yarmouth, after referring to the Land Tenure Reform Association, of which Mr. J. S. Mill is the President, said: "It is of no use saying to us that when things are wild, revolutionary, and visionary, you must remember that things which were considered wild and visionary forty years ago have been adopted by the strongest Government the country ever had. Every institution of the country has to be tried on its own merits, I may say its

theoretic merits. One grievance I pointed out to you a year ago, as an occupier of land that in a great agricultural country like this the occupier of the soil has no right whatever to any of the improvements he makes; there is no custom; unless he makes a private agreement, all those things are by law the property of the landlord. The custom of the country you talk about, viz., Lincolnshire, and its Tenant-Right, may be very well for Lincolnshire, but why in the world should it not be right for Norfolk, and, I say, for all other counties? Under this system of payment for unexhausted improvements, the agriculture of Lincolnshire has wonderfully advanced. I will ask you, as practical men, whether, if you were to receive notice to quit next Lady-day, and had to leave your farms at Michaelmas, you would not leave in the land at least £1 per acre of your property, which, I contend, ought to be as much your property as the balance you may happen to have at your banker's? Now, I say, with increased appliances of science, we farm better, and we farm more extensively, every day. Landlords say they do not like long leases. There is a great deal to be said for and against them, but I cannot see what there is to be said against compensation for unexhausted improvements. There is a great deal of floating capital in the land that is at the mercy of the landlord, but of which it is said, to the honour of the landlords in Norfolk, they have not taken advantage. But, I say, whenever there comes to be a discussion on the land this will be one of the things pointed out to show the bad relation which exists between the owner and occupier. For goodness, gracious' sake, then, let us try to remove the evil before that day comes." To quote all the allusions that have been made to this subject within the last six months would detain you here much too long, as their number is legion, but I trust those which have been given will have the effect of setting thoughtful minds to work in endeavouring to find the fairest way (and that very speedily) for some general system which shall protect the owner from damage, allow the occupier greater liberty of action, and recomp him, what he is fairly entitled to. With a view to show more fully how impossible it is in the present day to farm the land so as to produce from the soil the amount of beef, mutton, and corn it is capable of producing, under the agreements that are now in force, and with a six months' notice to quit, I may refer to the reports on the farms that have been inspected during the last two years, and the prizes offered in connection with the Royal Agricultural Society of England. Some idea may be formed from those reports (which, no doubt, most of you have read, and all would profit by reading) of the amount of capital employed in the cultivation per acre, and also what position a tenant would be in were he compelled to leave with a six months' notice, and without any claim for what he has left behind. I notice that the expenditure per acre on the farms inspected this year is from about 35s. to over £3, per annum in artificial food and manures alone. I would also refer to an excellent paper written in 1863 by Mr. Thompson, a few years since President of the Royal Agricultural Society of England. After referring to the benefits of leases and compensation for unexhausted improvements, he says: "As these causes will probably long continue to operate, it is worth considering whether there are any practicable means of at once mitigating the evils arising from the prevalent custom of letting farms at will, or an agreement terminable at six months' notice. These evils, though apparently of very different kinds, such as injury to the public by the inadequate cultivation of the land, and injury to the tenant, who, without sufficient cause, is suddenly dispossessed of his holding, are all referable alike to the same cause, viz., want of sufficient security for the capital of an improving tenant." He then recommends nothing less than 18 months' notice being allowed to take a crop of corn from the whole of the arable land as some compensation. In a discussion some years ago at the Midland Farmers' Club on this subject, Mr. Randall, of Chadbury, who is agent to several large estates, and one of the best strong-land farmers in England, alluded to the absence in almost all agreements of stipulations for clean farming; he adverted to the agreement he had in use, which is a very great improvement on those generally adopted, and compensates the outgoing tenant for land that is clean and fit to plant, on the one hand, and, on the other, charges him for what is not in a good state, with compensation for purchased food and manures; and he tritely remarked, "Under the present system the first thing a man has

to do on taking a farm is to get it into a good state of cultivation; the last thing he does on leaving it is to bring it to as poor a state as possible. This was unquestionably the ordinary practice, and a very improper and ruinous practice it was, which had been forced upon the agricultural community by the fact that, if a farm be entered upon in a bad state of cultivation, there will be no compensation made for leaving it in a better state. Some means were needed to make it the interest of a man to farm well to the end of his tenancy, and to do this there must be compensation for good farming, and a penalty for bad." I will next refer to the Agricultural Customs' Committee which sat in 1848, and took evidence from about 50 of the leading land agents and farmers residing in about 40 counties. This, like most other "blue books," is rather wearisome to read through and comprehend, but a very good digest has been arranged and printed by the late Mr. Shaw and Mr. Corbet (second editor of the *Mark Lane Express*) entitled "Agricultural Customs in England and Wales." From this any one may gain a great deal of information on the subject we are now considering, and I think all who read the evidence that was brought to bear upon the question of "compensation for unexhausted improvements," will see that although they did not recommend legislation, it was very strongly advocated, and the following extracts show how beneficial they considered something of the kind would be. Clause 13, alluding to compensation for improvements, runs thus: "That the improvements above mentioned, which are generally required throughout the country in order to develop the full powers of the soil, are greatly promoted by this system of compensation; and, therefore, it is highly important that all difficulties should be removed which stand in the way of its extension, by the voluntary act of landlord and tenants." In another clause they say that this wider system of compensation to the out-going tenant seems to be highly beneficial to agriculture, to the landlord, and to the farmer, to lead to a great increase in the productiveness of the soil, and to the extended employment of the rural population. The 14th clause, to a certain extent, appears contradictory, but it is only so far as the desirableness of legislation is concerned. It runs thus: "That any attempt to make its general introduction compulsory would be met by great practical difficulties, and your Committee rely, for the general and successful adoption of the system, on mutual arrangements between landlord and tenant." Twenty-four years had passed away since that was written, and how far has the system extended? We find on reference to our own experience, if we have visited the districts, that in the limited area where it is the rule and custom of the country to pay for unexhausted improvements, and where security of tenure exists, the cultivation of the land is farther a head of other districts than it was at the time the Committee sat, and that the system has very slightly extended. Yet we find the good understanding between owners and occupiers which is so desirable (and which I trust will increase rather than diminish), stronger in Lincolnshire, where this system has long been a custom almost more binding in law than probably in any other county, the land in the highest state of cultivation, a thriving tenantry, and the labourers well cared for. In support of these customs I may say the opinion is gradually gaining ground in our own and neighbouring counties that the land will not be made to produce what it is capable of producing unless many restrictions are removed, and off-going tenants dealt with on a more liberal scale than has been the custom. I know that many landlords and agents are seeing the daily-increasing necessity for this. I cannot go further without referring to a paper on "The Duties and Privileges of Landlords, Occupiers, and Cultivators," read to the members of the Farringdon Club by Mr. John Beasley, of Chapel Broughton, a name well known in the agricultural world, more particularly as agent to Earl Spencer and other large territorial possessors; and I feel that, from the position he has occupied so many years, his remarks will be received with the attention they deserve. Speaking of the occupier he says: "There is nothing more important, perhaps nothing so important, as fixedness of tenure, and I believe it is the duty and interest of every landlord to secure this to his tenants in one shape or another. I do not mean to say that there will not (and ought not) to be exceptional cases, such as will of necessity arise; but I am convinced that under good management, they will be few and far between. I do not give any decided

opinion as to whether this security should be given by leases or other means. I think a landlord is perfectly free to choose whether he will adopt leases or not, and some tenants prefer to hold their farms without leases; but unless a tenant feels that he is secure of holding his farm so long as he farms it well, and maintains a respectable character, he is not placed in a position to do justice to his landlord, himself, or to the labourers of his parish." In alluding to agents, who exercise so much influence on the large estates of this country either for weal or woe, Mr. Beasley fully delineates what should be their capacities and character. Some persons may perhaps think this reference may be going rather away from the subject we are met to discuss—"Tenure of Land," but I feel that much more of the prosperity and happiness of the middle and lower classes connected with agriculture depends upon the thoroughly upright conduct and the intelligence of agents than the outside world generally believe; and in these days of rapid development and changes in agriculture, it is more than ever important for gentlemen thoroughly conversant with everything that is due to landlords and tenants, practical, experienced men, and with a high sense of honour, to occupy that position. All who have paid any attention to these matters must acknowledge the power and influence of gentlemen holding these appointments. You may see on one estate encouragement and facilities given to enterprising tenants; and, on others, nothing can be allowed out of the beaten track, or the least departure from the "red tape" rules that had perhaps not been altered for centuries. There are so many important matters connected with this subject, that I feel I cannot touch upon many of them. The question of the "repair and maintenance of buildings" is so important to both owner and occupiers, that I think it requires more attention than is often given to it. The old proverb, "A stitch in time saves nine," is too often forgotten in these matters. Owner and occupier must combine, if buildings are to be kept in a good state at the least expense; and this is very important, because landlords very properly only look at the income from their land after all deductions are made. This has led to great charges on large estates, where a regular staff of carpenters, painters, bricklayers, masons, and others connected with the craft have been kept and moved from place to place on the estate. A wonderful saving has been effected by dispensing with these establishments, which too often have to do repairs that would not have cost more than a tithe had they been done at the first, and by some one on the spot. This matter materially affects the occupier, because he often suffers loss and inconvenience, and is constantly reminded of the large amount spent in keeping his holding in repair. The agent of a large estate, where all the materials are found by the landlord, and the labour divided between landlord and tenant (the tenant having the control and supervision of workmen), tells me that that system answers exceedingly well, and is very much approved by the tenantry generally. There can be no doubt that a saving on this head may be generally effected by a proper combination on the part of owner and occupier, and the freehold be kept in a better state. This discussion will be very imperfect, if nothing is said at the present position and future prospect of the labour necessary for the proper cultivation of the soil. No doubt the extirpation that took place in many close parishes until the passing of the Union Chargeability Assessment Act, has and will exercise a very prejudicial effect upon agriculture. Good cottages and good gardens must become as necessary appurtenances to properties as good homesteads, if good labourers are to remain among us. I hope all who have not already done so, will read Mr. Dent Dent on the condition of the agricultural labourer, in the last number of the Royal Agricultural Society's *Journal*. The long distance often travelled to and from work is detrimental to the farmer, and when near a large town or in a manufacturing district, places him at a great disadvantage. It will, therefore, be necessary for owners and occupiers to unite in providing such accommodation and inducement as shall give the labourer more interest in his home and occupation. The education of the labouring classes in rural districts is also very closely connected with the land, but it will, I fear, have little tendency to raise them in the social scale, so long as they have not the power of living in their own houses, or bringing up their families with those ideas of modesty, decency, and self-respect, which are so desirable. The enormous amount of costly machinery now applied to agriculture requires steady

and intelligent men to superintend it; and I feel sure that nothing will tend so much to raise the social condition of the agricultural labourer as intelligence and self-respect, which we should all endeavour to encourage. The researches of clever men in connection with agriculture have removed much prejudice and ignorance as to the effects of continuous cropping of land. I could give many instances in confirmation of this statement. The experiments of Mr. Lawes, of Rothamstead (to whom agriculture is much indebted), prove that there is a natural fertility inherent in the soil, below which it cannot be reduced. Swift says the first cause of a kingdom thriving is the fruitfulness of the soil to produce the necessaries of life. We must, therefore, bear in mind that the more we produce in this country the less will be required from abroad, and the more wealth will there be to expend on other commodities. Railways, and the increase of the general wealth of the country has tended to advance the value of land more rapidly than formerly, and this must show the greater necessity which exists for more freedom of cultivation and security for capital employed in agriculture. The occupier is not in a fair position if he receives notice of a re-valuation or to quit his farm, unless he has a chance of being compensated for what he has expended and has had an opportunity of receiving benefit from it. I know many, very many, noble examples may be cited of good understanding between landlords and tenants, and long may they exist and be multiplied! I believe that these discussions, conducted in a proper spirit, will tend to cement them and place them on a firmer basis. We must, however, remember that life is uncertain; property may change hands, and fall into the possession of strangers; and, as is often the case, widows may be turned adrift, with large families almost unprovided for, their property having been invested in the improvement of the farm by their father, who may have been taken from them in the hey-day of life. I have now laid before you, although feebly I fear, the necessity which exists for some general relaxation of the covenants that usually exist between owners and occupiers, not altogether from my own experience, but from that of many eading men in the various stations of life connected with agriculture; and I think all who carefully, thoughtfully, and without prejudice, give to the subject the consideration it deserves must be forced to the conclusion that an absolute necessity exists for many alterations. Although time will not permit my reviewing many other interests involved in this question, we cannot shut our eyes to the fact that they must be considered; but I reserve for a future occasion my ideas on many important points in connection with these matters. I trust the discussion to-day will be of a character that will remove prejudice, tend to progress, and to cement more firmly the relations between the landlord, the tenant, and the labourer.

Mr. C. M. CALDECOTT proposed the first resolution, which was as follows: "That in the opinion of this Chamber the absence of any definite provision for securing to tenant farmers the capital and labour they invest in the land, prevents proper cultivation, is injurious to the true interests of landlords, is a grave disadvantage to tenants in preventing a prudent use of capital necessary for profitable farming, and is the cause of an immense loss to the nation in limiting the growth of food far below what the land is capable of producing." He referred to the conviction, which had for very many years forced itself upon his mind, that in this country the tenant farmer lacked security for his capital and labour put into the land, and that the needless, stereotyped restrictions in the ordinary contracts between landlord and tenant greatly interfered with the proper development of the productive power of the soil. Having mentioned several instances in which the existing system was detrimental to the interests of the proprietor and cultivator of the land, he expressed his cordial acquiescence in the resolution which he had proposed. Referring to the question of agreements, he observed that that which Mr. Newdegate, M.P., had introduced from Lincolnshire, contained as few restrictions as any he had ever seen, and it embraced a compensation clause; that clause was also inserted in Mr. Davenport's agreements, but the latter contained rather more restrictions than he liked, although they were comparatively few. What was generally required was the introduction of compensation clauses and the omission of the foolish and injurious restrictions which were not, as Mr. Horley said, remains of feudalism but of "lawyerism" If landlords acted

on these old stereotyped conditions, they would be food for all the lawyers of the country.

Mr. WAKEFIELD seconded the proposition.

Mr. C. N. NEWDEGATE, M.P., commenced by referring to the report of the Agricultural Customs Committee appointed in 1848, and of which he was a member. He explained that, at the solicitation of friends, he resigned his claim to take the chair in favour of the late Mr. Philip Pusey, an old advocate of agricultural reform, but who was a sort of enthusiast, and consequently all the witnesses called by the Chairman were those of most advanced opinions, but who in their cross examination gave the committee better material from which to make their deductions. The usefulness of the report and evidence generally was proved by the fact that the House of Commons had since ordered both to be reprinted, and had not appointed another committee on the subject. On the question of land tenure he (Mr. Newdegate) had long since made up his mind. About two or three years after the issue of the report of the above-mentioned committee, he, without venturing to recommend anything to his brother land-owners, adopted for his own estate an agreement containing a compensation clause, founded on the first series of clauses adopted in Lincolnshire, the latter being admitted to be the best Tenant-Right custom in England or Wales. His tenants, however, were so unwilling to accept it that before they would do so he had to give them notice to quit but they subsequently yielded, and presented his mother with his portrait as a mark of gratitude and respect. In the present meeting Mr. Wise, M.P., had placed in his hands a copy of Lord Leicester's lease. He (Mr. Newdegate) was not in favour of leases; and his opinion was confirmed in a very able article in the last number of the Edinburgh Review. The relations between landlord and tenant in England and Wales were different from those in Ireland and Scotland, the advantage being on the side of England. Any agreement between landlord and tenant, when stamped, was as binding on both as an Act of Parliament; and it appeared to the agricultural customs superior to laws, because of the great variety in the treatment of the soil and the general cultivation in different parts of the country. In some parts of the country under the form of Tenant-Right had grown up customs which utterly impoverished the incoming tenant. It was with a view of providing a limitation and safeguard against this abuse that he adopted a specific agreement. The notion proposed by Mr. Caldecott was very wide. He had opposed the Irish Land Bill as a direct invasion of freedom of contract. It might be necessary for Ireland, in her unhappy condition, to have various officials regulating the relations between landlords and tenants; but no such necessity existed in England, and it was an infraction of freedom which they would do well to curb. He thought the word should be "contract," instead of "provision," in the clause of the resolution as to "the absence of any definite provision for securing to tenant-farmers the capital and labour that they invest in the land." He believed that what was wanted was more definite contracts. Some irritation had sprung up, he did not know why, on these matters. He would call attention to an extract from a Coventry paper, in which the writer stated that a Warwickshire farmer was under notice to quit, because his son had accidentally shot a pheasant, and added, "In the legislation of freely-elected Parliaments, when members are not mere nominees of landowners, sitting for semi-rotten boroughs, but chosen in proportion to the population by an educated constituency—landowners will not be able to punish the nation as they have done in the past." There was written on the newspaper these words: "Can Warwickshire landowners and landagents after the Irish 'bumblings' stand by and see such a disgustingly hateful thing done?" This was a threatening letter, and it was essential to the happy relations existing between landlords and tenants, that now when larger capital was invested in agriculture than at any other period greater security should be given. He contended that if tenants had not that security it was in a great measure their own fault, because they did not have described in their agreement the exact terms of the relationship to the landowner which they wished. He would next refer to the question of limited ownerships, and suggest that in such cases the law might be amended so that under the supervision of the Court of Chancery security might be given to a tenant in the form of an agreement which would be binding against the estate

and its successors. Beyond this he did not see any means by which any real benefit could be conferred by legislation on the subject. It was a dangerous subject for Parliament to touch. Parliamentary interference had already gone too far in many directions, and a grave mistake might be made if Parliament unadvisedly interfered with the existing condition of agriculture in England, and with the tenure of land as it had done in Ireland. There was a different system, and on purely a commercial principle in Scotland, but it had resulted in a great increase of rent, which increase had been obtained by the landowners at a great loss to their own social condition, and much to the detriment of the country. In England the system was founded on the belief that the landlord and tenant were partners in one concern. The terms of the partnership ought to be definite and precise, specific and binding. He was not prepared to do anything to break up that partnership.

Mr. BROMLEY DAVENPORT, M.P., Alluded to his desire to see tenant farmers possessing proper security for the capital and labour they invested in the land. He read extracts from his agreements with his Cheshire tenants, by which his tenants enjoyed full security for capital, and proper compensation for unexhausted improvements. He agreed with the portion of Mr. Horley's paper as to the utter uselessness of many of the restrictions in leases. The resolution before the meeting talked about the land producing the greatest amount of food of which it was capable, but in order to do so they must remove all hedgerows, and render the country generally in a state in which he should not like to live in it. He was prepared to agree to any resolution to the effect that some sort of agreement should be the general custom for giving to the tenants security for capital put into the land. He vindicated the landowners from the sweeping charges brought against them, and urged that although there were rogues in all classes, the landlords as a body were worthy of implicit confidence. He did not approve of Parliamentary interference between landlord and tenant, because it would imply want of trust in the landlord, and want of common sense in the tenant.

Mr. PERKINS thought the hon. gentlemen who had just addressed the meeting were labouring under an erroneous impression in supposing that the Chamber desired legislative interference between landlord and tenant, instead of simply suggesting means by which to remove the hindrances placed in the way of the cultivation of the soil, and to obtain for the tenant farmer proper security for the labour and capital he invested in the land.

Mr. FINLAY DUNN (Shipston) depreciated any application for legislative intervention with landlord and tenant, believing that the landowners of this country and the educated tenant farmers knew their own business far too well to require the interference of a third party in making agreements for them. He expressed his concurrence in Mr. Horley's remarks with respect to the imperfect development of English agriculture. The agricultural produce of this country represented two hundred millions sterling per annum, and yet for something like forty years there had been but a comparatively small increase in this large return. It was estimated that there had only been something like 16½ per cent. increase in the agricultural returns of England, Ireland, and Scotland, during the last forty years. The increased application of machinery to agricultural purposes and the investigations which had been made by scientific men had attracted much capital to the land, and added to its productiveness, but its produce was far below the standard which should be obtained. An increase of one-tenth in the products of the land added twenty millions sterling of profit to landlords, tenants, and labourers. In the leases and agreements with which he was connected in Warwickshire, he had always recommended that there should be a certain amount of permanence in the arrangement between landlord and tenant. Mr. Newdegate had objected to leases as interfering with the partnership which ought to exist, and did exist between landlord and tenant; but he (the speaker) considered that a lease prolonged the partnership and rendered it stronger and more definite. Great injustice was often done to tenants who had laid out a great amount of capital on the understanding that the holding was to be permanent. He knew an instance in which a gentleman took a considerable tract of land, five or six years ago, on the assurance that he should not be disturbed. On this understanding he had laid out about £10 an acre in various improvements. Two years ago the property was sold, and

the tenant was now about to quit on six months' notice, leaving a very considerable amount of capital in the soil. He agreed with what had been said as to the extreme importance of unfettering the tenants as to the mode in which he cropped his land, believing that, with the advance of agricultural science, they might safely depart from the beaten track without deteriorating the permanent value of the land. In all the agreements with which he had to do he invariably allowed tenants to farm in any way they liked until within the last four years of the termination of their agreement. In order to induce the continued application of a proper amount of capital till the end of the term, it was important to introduce compensation clauses for improvements of various kinds. In this way a system of high farming would be maintained, which would be beneficial to the landlord, the tenant, and the public. One of the defects in the Earl of Leicester's new lease was that he did not recognise the necessity of allowing for manures purchased and buildings erected suitable to occupation, which might, with profit to the landlord, be included in covenants between landlord and tenant.

Mr. BERRY CONGREVE thought the Chamber had heard a little too much of the landlords' side of the question. Although not wishing to say a word against the feeling evinced by tenants towards landlords, he could not help thinking that they sometimes went too far in trusting to what was called good feeling and a sense of honour. Tenant-farmers wanted some security for their outlay, and to have their relations with their landlords not dependent on a good verbal understanding merely, but placed on a sound, business-like footing. Farming was a business, and, like other commercial transactions, it should rest on a firm basis so far as the terms of the occupancy were concerned. Every day they were witnessing the evils arising from the want of a proper system of Tenant-Right.

Mr. G. F. MUNTZ regretted that Mr. Berry Congreve should have spoken of there being different interests between landlords and tenants, because he believed that those interests were identical. Mr. Newdegate had complained of the wideness of the resolution, but the council intended it to be wide, in order that members might not be committed, and that the field might be left open to a free and full inquiry. As a landowner, he wished to have an agreement which, while protecting his property, would also give to the tenant security for every shilling he put into the land. Mr. Davenport had told the Chamber he gave compensation for bones. He (Mr. Muntz) wished to see a man paid for his brains. This was an important point for landlords. As the law and custom at present stood, wise and prudent men, who could get useful and profitable employment for their capital elsewhere, would not put it into the land; and if the same protection for capital existed in agriculture as in other branches of industry the flow of capital in that direction would be larger than it had ever been before. The landlords could not have high rents unless the tenants had large profits. Opportunities should be afforded the tenant of making the land more productive, but, under the present system, hardships were often inflicted on the tenant. He was not in favour of legislative interference, and he trusted that both landlords and tenants would give each other credit for the best intentions.

Mr. FOSTER said he was not opposed to legislative interference, and spoke strongly on the necessity for Tenant-Right.

Mr. NEWTON, chairman of the Hensley branch Chamber, deprecated legislative interference, and thought its operation impossible unless in England we lapsed into the state of things which existed in Ireland.

Mr. CALDECOTT briefly replied.

Mr. JOHN FORD, the Chairman, said: The subject we have been discussing is unquestionably one of national importance, and I think the council of this Chamber has exercised a discretion in bringing it to-day before its members. It is indeed a subject of great moment, for it affects not only the tenant-farmer but the landlord and the consumer, because if the tenant-farmer feels that he has a safe and tangible security for the profitable investment of his capital, he will be disposed to give a higher rent for his farm, which will be an immediate benefit to the landlord. He will also be induced to adopt a more spirited mode of cultivation, which will result in an increased production, and thus be beneficial alike to himself and the community. Mr. Horley's paper will I trust be instrumental in promoting the extension of the principle he has so ably ad-

vocated—a principle which men of great judgment and experience in these matters has affirmed to be not only most desirable, but actually necessary—this principle has at various times been called by various names, such a "Tenant-Right," and "Compensation for Unexhausted Improvements." Here we had it presented to us to-day under the more modified and less objectionable term of "Land Tenure," by which I think is understood the relations which exist, or should exist, between landlord and tenant, and which it is so desirable should be of such a nature as, while affording a complete system of preventing the deterioration of the landlord's property at each recurring change of tenancy, should also secure to the tenant the full benefit of his outlay, and of his unexhausted improvements, and thus do away with the pernicious and ridiculous system of annual tenure, which has seriously crippled, if not well nigh ruined, many an honest man and good tenant. I have listened with great attention, as well as satisfaction to the language and arguments which Mr. Horley adduced in support of his views, and I will do him the justice to say he has treated the subject with very great credit to himself. It is impossible in the short time at our disposal to go through the various points of the paper, but I have observed that while Mr. Horley lays down no dogmatical or infallible method of altering the existing state of things, he most emphatically urges the necessity of some change, and pleads especially for more extended liberty of action in the cultivation of the soil. This is unquestionably very desirable, and will follow in the wake of a more enlightened system of land tenure. Several other gentlemen have favoured us with their views, and it is literally impossible to reply to them all. I, myself, have long and deeply considered this subject, and I have come to the conclusion that we must look for a solution of our problem to those countries and places where we find the best principles and practices of farming prevail, and where they are attended with the most beneficial results. Mr. Horley has referred to the opinions of Lord Derby and Lord Leicester on the subject of leases, and he also said, at the commencement of his paper, that no doubt all advanced minds will favour leases. I cannot venture to include myself in this number, but I cannot help feeling that in Scotland, in Flanders, and in the Netherlands we shall see the benefit of this system of tenure. There are possibly and probably other ways of settling this question, such as a pre-arranged mode or rate of compensation for unexhausted improvements, or some well-defined system of agreement, by which mutual confidence is secured. That something must be done is beyond all question. No landlord can reasonably expect a tenant to lay out a large capital upon his farm without some kind of security, or bury his money in the soil without some chance of recouping himself, and I think while I may safely remark that long leases and good farming have generally gone together, and, *vice versa*, I may truthfully add that the landlord who in these days stands coolly aloof, declining to offer to his tenants any confidence or security in some form or other, is tolerably sure to find himself and his property left behind in the general rate of progress. I am very pleased to see so many landlords here. It is an angry of better times. I am equally rejoiced to see so many tenant-farmers. It is a proof they are at last become alive to their true position, and that the immobility with which they have been so long taunted is passing away; but I would just say a passing word to the latter, that they should have some consideration for their landlords; that, although the possession of landed property is very desirable as giving a social status, it is embittered by the recollection that it is the worst investment a man can make in a pecuniary point of view, and that with constantly recurring expenses in buildings, drainage, repairs, and other things, it pays a very poor rate of interest. I sincerely believe that landlords are anxiously and heartily desirous of doing justice to their tenants, but I fear they are not sufficiently acquainted with their wants, and leave too much to their agents, who as a rule are not better informed than themselves. But how can it be otherwise when we see perhaps a London solicitor deputed to manage an estate lying hundreds of miles away, and about the management of which he is thoroughly ignorant; or some head clerk or foreman promoted, or a broken-down old gentleman, or a poor relative or friend, or a retired officer who has spent all his life in India, suddenly chosen to manage a large property about which not one of them understand any more than a full private from a chosen regi-

ment of the Horse Marines? If noblemen and gentlemen would exercise a little more discretion in their selection of men for the management of their estates, we should not so often see or hear of those disagreements between landlord and tenant, which frequently bring—however unjustly—the former into disrepute. I know the position of the British farmer is neither one of satisfaction or repose. He sleeps in no more security than did Damocles of old; and the suspended sword, in the shape of a six months' notice to quit, is perpetually hanging over his head, threatening every moment to fall and pierce him through—to confiscate his property, to scatter to the four winds of heaven the endearments, the old associations, and loved and cherished hopes and memories of long and laborious years of anxious toil and active energy. I say these things cannot, they must not last any longer; the worn-out system of annual tenure, and the old stereotyped forms of agreement, must all be swept away; they are not consistent with any sound recognized principle of political economy, they are not in accordance with the spirit of the times, or the general advancement of the knowledge and intelligence which permeates all classes. Farming is no longer what it was—a primitive occupation, nor is it an antiquated traditional art capable of being transmitted from father to son, but it is now become a modern business, requiring much deep thought and scientific study to carry it on profitably and successfully. Agriculture, indeed, is now become the wisest of the sciences, for it embraces or touches up all problems from the constitution of soils to the laws of life.

Mr. Caldecott's resolution was carried.

Lord LEIGU (Lord-Lieutenant) proposed "That a committee be appointed to report on the best mode for removing the evils expressed in the first resolution, and that it consist of equal number of landlords and tenants, not exceeding twelve; four to form a quorum." After eulogising Mr.

Horley's paper and the speeches which had been made, his lordship expressed his cordial acquiescence in the sentiments enunciated in the paper, and in the resolution which had been adopted. He took it that the object which the meeting had in view, was to lay down some general rule or custom for the adoption of the country. Mr. Newdegate, Mr. Davenport, and many others, himself included, were quite ready, and had always been willing to give compensation for unexhausted improvements; but there must necessarily be many landlords who did not follow that rule. If the rule was generally followed throughout the district, it would be a very great gain to the community. The matter required grave consideration, and he thought the right course to be pursued would be to appoint a Committee to make enquiries, and report on the best means of removing the evils which were admitted to exist. He would not detain the meeting with any observations as to the importance of giving compensation for unexhausted improvements, as so much had been said on that point. He wished to make one remark respecting agreements, and that was that the simpler they were the better. The less a tenant was fettered by useless restrictions the better it would be for landlord and tenant; as a good tenant should have as much liberty as could possibly be afforded.

Mr. BERRY CONGREGUE seconded the proposition, which was carried unanimously.

The Committee was constructed as follows: Landlords—Lord Leigh, Mr. Newdegate, M.P., Mr. C. M. Caldecott, Mr. G. F. Muntz, Mr. G. Wise, and Mr. Mark Phillips. Tenants—Messrs. T. Horley, jun., Wakefield; J. H. Burberry, J. Hicken, S. B. Congreve, and Endall; the chairman, and vice-chairman, *ex-officio* members.

Thanks were voted to Mr. Horley for his paper, and to the chairman for presiding.

T E N A N T - R I G H T .

At a general meeting of the members of the Worcestershire Chamber of Agriculture, at Worcester, the subject discussed was Tenant-Right. Mr. G. Whitaker presided, and there was a large attendance.

Mr. RUSSON said, on the subject of Tenant-Right, he was perfectly aware of the difficulties surrounding the question, the delicate treatment it required, and his inability to do it that justice which its important nature demanded. He contended that the agriculturists, as a class, had an equal right to ask for a simple act of justice as any other class in the country, and if they asked for it in the manner recommended by Mr. Caird in the Scotch Chamber, no landlord need be offended. Referring to the present unsatisfactory position of the land question, he attributed it to the following causes: First, because many farmers invested their capital only so far as they saw the probability of recouping themselves within a given period; consequently the occupation was not so profitable as it otherwise might be, the resources of the land were not developed, and the people were deprived of that amount of food which they had a right to expect. Secondly, tenants had faith in their landlords, who were in the main honourable and just men, and would scorn to take advantage of them; but it occasionally happened that the landlord died, or the property passed into other hands. The new possessor, not feeling bound by the acts of his predecessor, had the farm revalued, and it generally ended in the rent being raised. Thirdly, such was the competition for land at the present time that, as soon as a farm became vacant, there were fifty applicants, who in their eagerness to obtain possession of it did not look very closely into the terms of the tenancy. To the question, "Why do farmers take their farms unless upon lease?" he answered that many landlords objected to grant leases, and that when they were granted they were very little good, excepting as letting the tenant know how long he would have his farm, and he made his arrangements accordingly. Another disadvantage arising from the absence of Tenant-Right was this—that, in consequence of the dependent position of the tenant farmer, he was unable, as an Englishman, to assert his right in the expression of his opinion with perfect freedom upon a subject in

which he was particularly interested, for fear of offending his landlord or the agent. When did the tenant farmers get from the Government that consideration which their wealth, their numbers, and the capital invested entitled them to receive? To show that tenants were sometimes victims to the caprice of the landlord, or to a dispute with the agent or gamekeeper, Mr. Russon quoted a case in which a tenant on the estate of a nobleman, who had conceded to his tenants the right to kill hares and rabbits, and was held up as a model liberal landlord, received notice to quit, or, in the elegant and figurative language of the agent, "liberty to remove himself and his capital to a more advantageous occupation," because a speech made by him at an agricultural meeting at Leamington had given offence. In his own neighbourhood a tenant applied for and received the refusal of a small farm contiguous to his own land, which farm had been in a most disgraceful state for years. On asking for a lease of the land, the agent replied that the landlord never granted leases, but that he was so well known as a good landlord, that no tenant, so long as he farmed properly, need fear being turned out, or having his rent raised. The tenant set to work to improve the land, and did everything to get it into a good state of cultivation, at an outlay of about £10 per acre. The old landlord subsequently died, the services of the agent were dispensed with, and, in the words of the Israelitish law-giver, "A king arose in the land who knew not Joseph." The tenant received notice to quit, and on writing to ask why he had been subjected to such treatment, as he was not aware of having done anything to deserve it, he received an evasive reply. On repeating his request, he had no reply at all. Some explanation of this might be found in the fact that the farm was let to the new agent's friend, who was the trustee of the agent's son-in-law, at a rental of 13s. per acre more than the previous tenant had paid. He (Mr. Russon) could vouch for the truth of this incident, as he himself was the unfortunate tenant. This landlord had since given all his tenants notice to quit, in order that a fresh agreement, a copy of which he read, might be entered into. One of its provisions was that the tenants should keep so many dogs for the landlord, and

another, that on the death of a tenant, the land should be given up on the 25th of March following. In return for this, the agreement provided that in case of notice to quit being given to a tenant, the latter should be entitled to receive from the landlord or the incoming tenant the full value of any unexhausted improvements. The Michaelmas tenants on the estate were also required to become Lady-day tenants. In consequence of what had been stated, however, there had been a little modification of the agreement in some instances. The landlord to whom he referred was a peer of the realm, and one of our hereditary legislators. His patent of nobility dated from 1442, and he evidently wished to revert to the usages and customs in vogue at that period. He (Mr. Russon) had no desire to make an attack upon landlords, but to expose injustice. These might be exceptional cases—he hoped they were—but robberies and murders were exceptional cases, and yet it was considered necessary to have laws for the protection of life and property. He contended that the landlord who exercised his power to appropriate that which belonged to the tenant, as the result of his capital and industry, was deserving of the epithet applied to it by the late Lord Clarendon, namely, “felonious.” In the first place, then, a system of Tenant-Right or compensation for unexhausted improvements, would be an advantage to the tenant, by giving him security for his capital, and compensation for improvements, he would be able to spend his capital freely, according to the modern and improved system of farming. In the next place, it would benefit the landlord, because more capital would be applied to the land, and greater fertility would be the result. But the greatest benefit arising from the establishment of Tenant-Right would be derived by the people, because, by the application of a vast amount of capital to the land, its resources would be developed, and a large additional food supply would be available for the population. The employment of the capital now paid for foreign corn upon the land would give increased employment to labour, obtain cheap and abundant food for the masses of the people, and tend to increase the wealth and prosperity of the country. What prevented the land from being brought into a high state of cultivation? And why should the millions required annually for the purchase of foreign food be paid to the foreigner instead of being kept in this country? Because there was no security for capital, no encouragement for the tenant to spend his capital on the land, and no Tenant-Right. He trusted the discussion upon this subject would cause the landlords, not only as an act of justice, but as a matter of policy, to combine with the tenants for the purpose of coming to a fair and speedy settlement of the question, thereby preventing the interference of those persons who, having little sympathy with the occupiers and owners of the soil, might claim to have some part in the arrangement in which the landlords might not receive that consideration to which they were entitled. He would conclude by moving the following resolution: “That, taking into consideration the non-development of the resources of the soil in this country, consequent upon the absence of sufficient security for the tenants’ capital invested therein, this Chamber is of opinion that a moderate and equitable system of Tenant-Right should be established, thereby benefiting the landlord, giving justice to the tenant, and increasing the supply of food for the people.”

Mr. PEARCE seconded the motion. Seeing that the landed interest was so insignificantly represented in that room, he thought there was a want of the feeling on the part of the landlord which the tenant very much needed at the present time. He regarded this as almost entirely a landlord’s question, and if it could have been approached under a designation other than that of “Tenant-Right” he should have seconded the resolution with greater pleasure. He himself had received compensation for unexhausted improvements, from three distinct landlords in that county; and therefore they must acknowledge that a great amount of consideration for the tenants was shown by a portion of the landed interest. At the same time they could not shut their eyes to the fact that some landowners were disposed to be overbearing, and were backward in giving their tenants that stimulus which they needed in the present day. He contended that the absence of security for a tenant’s capital excluded many intelligent and enterprising men, with great capacity for developing the resources of the soil, from the occupation of the land.

Mr. VARDEN said he agreed that the low cultivation of the land was an injury to the nation as well as to the owners and

cultivators of the soil, and it was their interest to seek out and remove the cause of the present state of things. English agriculture had grown from a simple art to a complicated science. Farming was now a commercial pursuit; the farmer was a manufacturer; and these changes rendered desirable a revision of the laws and customs regulating farm tenancy. All classes were interested in the result of the discussions upon this subject, for higher cultivation of the land would give the landlord more rent, the tenant-farmer more profit, the nation larger remuneration and more regular employment for its labourers, and the people a more abundant supply of food. The speaker, by pointing out that the amount of marketable produce considered by their grandfathers and great grandfathers as requisite for rent and taxes was about the same as that paid at the present time, showed that landowners had not been induced, by the great competition which existed for land, to extort a higher rent than the old custom proportion. He asked them to bear this in mind, for if some of the principles of Tenant-Right as now proposed should be carried into effect the system of rack rent must be substituted. As science advanced the large rates paid in some instances for land would increase, especially when greater experience was obtained, and higher cultivation took place. Thus, agriculture was not limited by what was possible or profitable. Extra cultivation would involve doubling the produce of the land, and to do that additional capital, larger than the present capital, was necessary, but how much larger was not known. It was estimated that probably £10 per acre would have to be provided by the landlords, making 460 millions, and the same amount by the tenants, making 460 millions more, or 920 millions in all—a sum which the nation could furnish in the next 20 years, without crippling its industries. If the security were good, immense as that sum was, the interest upon it would not equal the amount now paid for foreign food; and yet, by expending it in the country, they could raise three or four times the quantity of food obtained from abroad for the money. The security which the landlord could offer for raising this large sum of money would be the best, namely, the land itself, and the improvements to be effected upon it; consequently he could raise his share at a less rate of interest, thus showing that it was more advantageous for permanent improvements to be made by the landlord than by the tenant, because the latter, not having so good a security to offer, must pay a higher rate for his money. If, then, the landlords could raise the requisite money so easily, why did they not make the desired improvements? The decline of agriculture had been most marked since the one shilling import duty on corn was removed. That tax raised the price of wheat in the market 2s., and to that extent counterbalanced the local taxation then paid by the English grower. But those local payments had increased, and the import duties being now entirely removed, landlords were disinclined, in fact, they were unable and unwilling, to convert lightly-taxed movable capital into heavily-taxed fixed capital. This state of things was a great injury to the nation, for the nation required abundant food for its manufacturing prosperity, and to bring about that fiscal and intellectual improvement of its people by which pauperism and crime were to be diminished. Moreover, the greater prosperity of agriculture would react upon commerce and manufactures, and make them more prosperous also; but until this fiscal obstacle to the improvement of the land was removed, by reducing the taxation on fixed capital to a level with that on movable capital, landlords, as prudent men, dare not make the outlay; hence local taxation was the first requisite. The second requisite was to put the tenant farmers into a position to raise their share of the capital, and to apply it to that high cultivation by which alone they could obtain adequate remuneration for their capital and skill, and be able to pay the landlords sufficient rent for making an improvement of the freehold, and giving up the control of their property for long periods of time. He was in favour of long leases, which were viewed with great satisfaction in Scotland, as constituting the security upon which tenants could raise their part of the amount, and said he felt confident that long leases were the second power to which they must look for agricultural improvement. Whether long leases were adopted or not, a revised code of the laws and customs of farm tenancy was necessary for the interest of both landlord and tenant; and this, if made upon a broad and comprehensive principle, would be the third power of raising the condition of agricul-

ture. Wishing to cover the whole of the question, and not to fix their minds so entirely upon the wants of the tenant-farmers, but viewing them as the wants of the whole community, he proposed as an amendment: "That the want of security for the investment of capital in the improvement of the soil makes a revision of the laws and customs of farm tenancy desirable for all classes, and this Chamber hopes landowners and tenant farmers will cordially unite their efforts to obtain this principle on broad and equitable grounds."

Mr. WEBB (Fladbury) seconded the amendment, and said that what was most wanted in that county was a better custom. In some counties what they required was conceded by custom.

Sir JOHN PAKINGTON, Bart., M.P., said he deprecated the proposal of a motion and an amendment, because the tendency of such a course was to give the appearance of a difference of opinion. As one of the landlords of the county, he would at once say that he was perfectly ready to vote either for the original motion or the amendment, for it appeared to him that in spirit and intention they were nearly identical. Subject to a few words, which he would address to them, he took no exception to the term "Tenant-Right." He was perfectly prepared, in what he called a fair and legitimate sense, to accede to the principle of Tenant-Right. In his opinion the time had arrived when this important subject ought to be seriously entertained. Mr. Russon having referred to the case of Ireland, if he (Sir John) might venture to humbly offer his advice, he would say that the less they turned to Ireland for guidance in agricultural matters, the better. He did not think they would learn anything from Ireland. If they thought of adopting any part of the Irish system, there was one point on which he confessed he should feel great anxiety as a landlord, namely, that amongst the many liabilities to which a landlord was fairly open in this country, he should be sorry to add that of being shot—one of the most conspicuous liabilities to which an Irish landlord was subject. He hardly knew whether he would most consider this as a landlords' or a tenants' question; it was a question which deeply affected the interests of both. That was the deliberate judgment at which he had arrived, and he hoped the discussions upon the questions would be studiously conducted, with moderation and a just regard to what was due to the interests of all parties. Whether it was called compensation for unexhausted improvements or Tenant-Right, he thought they might sum it in one concise and expressive word, namely, security. He had had a very strong opinion upon this subject from the time of that great change in the position of the agricultural question dating from the Repeal of the Corn Laws. It must be admitted that that measure gave a great stimulus to agriculture, and an additional status to the British farmer. Their neighbours on the other side of the Tweed were in advance of them on farming, and he believed the cause of that superiority arose from the fact that

in Scotland there had always been a system of security. The consequence was capital had found its way to the cultivation of the soil. He cared not whether they called it Tenant-Right or compensation, the principle was security; for unless the tenant knew that the capital he put into the land was safe they would never have high farming, and without high farming they would never have that state of cultivation which was as profitable to the landlord as to the tenant, and equally to the interest of both. What, then, was the best form of security? Having on different occasions expressed himself in favour of giving tenant-farmers security by granting leases, he was bound to add that he had received very little encouragement either from the landlords or the tenants. He had generally found that the landlords were not fond of granting leases, and that in the majority of instances the tenants did not like to take them. He had offered leases to his own tenants, some of whom had taken them; and where they had been taken he, as a landlord, had no reason but to rejoice at the change. Men ought to be good farmers to embark in long leases, and in that case it was to the interest of landlord and tenant that leases should be entered into. A friend of his, who was a large landed proprietor in Scotland, and the owner of a fine estate in the well-farmed county of Lincoln, had his farms held under leases in the Lothians, and in Lincolnshire under what was there without guyness called a system of Tenant-Right, whereby a man giving up his tenancy made a claim for fair compensation for unexhausted improvements. Where a system of leases was adopted, it was found that a system of landlord-right must be introduced into the agreement, in order to protect the owner. It was only right that he should be protected from injury to the farm during the latter years of the lease; but though the Scotch system had led to a splendid method of farming on the estate of his friend, yet as an intelligent landlord he preferred the Lincolnshire mode of Tenant-Right with no leases. As a landlord and a landowner he (Sir John Pakington) had no decided feeling one way or the other, but he was strongly of opinion that, for the benefit of the landowner and for the benefit of the occupier, they ought to have some recognised system of security—a system under which the tenant should not be afraid to invest his capital in the soil. Whether that should be done in the shape of giving compensation for unexhausted improvements, or in the taking of long leases with proper covenants, was, he thought, a comparatively unimportant question.

Mr. SMITHEN said that, if tenants could be induced to farm as well at the end of the lease as at the beginning, the object would be met. Instead of being left in a state of exhaustion, farms would then be in a good state of cultivation at the termination of the occupancy.

Mr. VARDEN withdrew his amendment, and the original resolution was carried unanimously.

K I N C A R D I N E S H I R E F A R M E R S ' C L U B .

At a recent meeting Mr. G. J. WALKER, Portlethen, read the following paper on the breeding of Polled Cattle:

Cattle, always an important commodity in farming, have of late years become to the farmer in this country an object of even greater concern than formerly, inasmuch as, from the high price of butcher meat, it is more desirable than ever to put fat on them as quickly and cheaply as possible. To attain this end, I am sure you will all agree with me that there is more required than the mere food consumed, however nutritious. There is, I venture to say, a foundation required, in the shape of an animal, and good points, quality, and constitution. Without these, how often is the feeder disappointed and his money swallowed up, without any adequate return? I have not referred to breeding or blood, as I hold that good quality and easy feeding are unmistakable evidences of high breeding. If therefore comes to this, that we should always endeavour to feed well-bred animals, and to get a larger supply of these. I think the farmers of this county ought to breed more cattle than they do. They would then be more independent in such times as the present, with pleuro and murrain raging over the country. Supposing you make

up your minds to do so, the significant question you ask is "What breed shall we start with?" You will naturally suppose that I will at once recommend the polled Aberdeen and Angus breed; and so I do, provided your tastes induce you to breed a pure breed, because for this part of the country I know of no breed to equal them, all things considered. But if you are not so disposed, and wish to keep a cross or mixed stock, to rear bullocks for the butcher alone, then let it be of black polled cows, well selected, and a Shorthorn bull. The produce is as good a butcher's beast as exists. Or, what may be worth a trial, the opposite cross—Shorthorned or cross cows and a black polled bull. This is now being tried, I understand, by a gentleman in Aberdeenshire, and the success of the experiment may be watched: I am not so hopeful of it. But with all these crossings with different breeds, you should not go much further than the first cross, or else you will be disappointed. There is, beyond that, a tendency to long legs and coarse bone, and less of good feeding properties. It is a remarkable fact, in breeding high-bred cattle of the polled Aberdeen and Angus breed—and I doubt not the same may be said of all pure breeds—that the breeder can almost invariably

identify the offspring of any well-known bull or cow by the general outline and gait, and especially by the likeness of the head and ears to those of the sire or dam. I find that the females take generally after the dam, and the males generally after the sire, unless there exists any very striking feature peculiar to one or other, which will show in a more or less marked degree. But, as a general rule, my belief is that of the two—the male and female—the animal of the purest blood always has the greatest effect on the form and character of the progeny. I do not believe in farmers keeping and breeding two pure breeds of cattle at one homestead, however carefully they may do so. Black polled cattle were known first, I believe, in the counties of Aberdeen and Forfar, as the Buchan and Angus “doddies.” I am not aware of their origin; I believe it is very remote. I have heard the admirers of the Galloway breed claim for the Galloways that high privilege, but I do not think their claim is good—we have no proof of it; and with all due deference and respect for that excellent breed, I think, if from it has sprung the present Polled Aberdeen and Angus cattle, the parent has sadly degenerated in quality and form. No doubt the Galloways were at an early period better known in England and in the south of Scotland than in Aberdeen and Angus, as from their proximity to the Borders they were largely bought by the graziers of several English counties in the lean state, and taken over the Borders to be fed. But I am inclined to think that the Galloways and Aberdeen and Angus are two distinct breeds. At no very recent date, it was said that some of the breeders of Polled Aberdeen and Angus cattle, thinking to improve their stock by a dash of Galloway blood, did introduce such into their herds, with the desired results to appearance in the first offspring, but the succeeding generations did not, I believe, encourage any more experiments in that direction. Aberdeen and Angus cattle are now bred principally in the counties of Aberdeen, Forfar, Banff, Moray, and Kincardine. The old Angus and Buchan “doddies,” although in their general character very much alike, still possess different features in several instances, especially in the quality of the hair and skin, and the size of the ears. The Angus and Aberdeen cattle, from the mixing of the blood of the various herds, have now become one and the same. The foremost amongst the early breeders of polled cattle, and one who in his day did very great service in improving the breed, was the late Mr. Watson, of Keillar. Next to him I may mention Mr. Fullerton, Ardovie, now at Ardestie, from whose stock, dispersed some twenty years ago, not a few of the “cracks” trace their descent. Of late years the breeders of improved polled stock have largely increased in number. Several, no doubt, have given up the breed, but others have taken their places. I regret the withdrawal of Lord Southesk’s name from amongst the list of breeders of polled cattle, in consequence of the cattle plague unfortunately carrying off his lordship’s fine and valuable herd. The plague made sad havoc in several other herds at the same time, but notwithstanding all this the breed is gaining ground. Lord Southesk did a great deal for it, and not the least in my opinion, was the support and encouragement given by his Lordship in starting the Polled Herd Book. I suppose my father is now the oldest breeder of polled Aberdeen and Angus cattle alive. The first notable bull I find he had was Porty, by Colonel, from the tribe of Rosy, a Downie cow. Porty, before the days of the Aberdeen Show, won the first prize at Inverurie as an aged bull in a class open to Scotland, and his sire, Colonel, was born in 1818. Since that time, fifty-four years ago, the polled Aberdeen and Angus have been the only breed bred or kept at Portletten, and the aim has always been, so far as human forethought could do so, to improve the breed, but by all means to keep it pure. Of the leading breeders and most successful exhibitors of the present day I would name Sir George Macpherson Grant, Mr. McCombie, M.P.; Mr. Taylor of Glenbarrie, Mr. Morrison of Bogue, Mr. McCombie of Easter Skeue, Mr. Fordyce, M.P.; Mr. Bowie, Mains of Kelly; the Earl of Fife; the Earl of Airlie; Mr. Brown, Westertown; Mr. Paterson, Mulben; Mr. Walker, Montbleton; Sir Thomas Gladstone; Mr. Scott of Tulloch; Mr. Skinner, Drumin; Mr. Barelay, Anchlossan; Dr. Robertson of Hopewell; Mr. Leslie, The Thorn; and Mr. Ferguson, Kinlochtry, not to forget our respected Convener of the County, Colonel M’Inroy, who all take a deep interest in the breed. The points of a good polled Aberdeen and Angus bull may be described as follows: Colour, black;

head neatly put on; clean throat and sweet muzzle; not over long ‘twixt the eye and nose; eye bright and prominent; ear moderately sized; good breadth betwixt the eyes, and poll high; neck a good length, and clean—a little, but not over full on top; chest full and deep; legs short, but not so as to give the animal a dumpy appearance; bone clean, and free from coarseness; shoulders not too full, and top free from sharpness, but not over broad; back level and straight; ribs well sprung; deep barrel; well-ribbed down towards hook; full behind shoulder; hooks level, but not too broad for other proportions; and well and evenly-fleshed to tail; twist, full and long and well-fleshed down, but not protruding behind; tail of moderate thickness, and hanging straight; hair soft and plentiful; skin of moderate thickness, and mellow to the touch; body fully developed, and the animal, when in motion, to have a blood-like look and style about him. A cow should differ from a bull in the head, in having, instead of a broad, masculine looking head, a neat feminine looking one. The ear should also be of good size, with plenty of hair in it; the neck well put on, clean and straight, and without any prominence on the top, or abrupt hollow where it joins the shoulder; the top of shoulder sharper than the bull’s, and the shoulders themselves thinner. In both seurs are objectionable. It is the breeder’s study to get his stock to flesh evenly, and in feeding, to fill up in the most valuable parts. Freeness from any tendency to be bumpy or patchy is also desirable; but I do not believe, as some evidently think, judging from the criticisms one hears in show-yards, that such a tendency is a sure sign of impurity in the polled breed. In fact, we know from experience and observation that such is far from the case, and is often the effect of in-and-in breeding, and want of attention to the proper selection of the sires and dams, and should not therefore be recognized as any rule or guide in this matter. The polled breed, for their bulk, weigh heavier than Shorthorns or Crosses, and command the top prices of the leading markets. They are hardier and therefore better suited for our open and exposed country, and where Shorthorns would not thrive. We should consider these questions—what class of animals breeds most surely, stands the climate best, is hardiest, least liable to disease, is most easily kept, gives the best milk and in greatest quantity, grows and fattens soonest for the amount of food consumed, weighs heaviest for bulk, and, when ripe, realizes most per ewt. My answer is that the Aberdeen and Angus polled breed comes nearer to this standard than any other breed I know. Of course it will be admitted that to ensure success, care and judicious management are necessary. But these are requisite in all undertakings. There is a great mistake made, I am convinced, by farmers and graziers paying so little attention generally to the shelter of their stock over-night in the fields. One bad, cold, wet night will take more flesh off an animal’s bones than two good, dry, warm ones will put on, besides the injury to their constitution. Comparing the black polled animal with the Shorthorn or Cross, the Shorthorn and Cross grow faster, but eat about a quarter more food. This was tested by my father and the late Mr. Williamson, then the principal butcher in Aberdeen, at an out-farm of my father’s, by a careful selection of four polled and four Shorthorn Cross heifers. Each was weighed and valued, put on the same kind of keep, and all got as much turnips and straw as they could eat. The result showed what I say, that the Shorthorn Crosses required a fourth more food, and when all were sold off together at the end of April, the polled brought a couple of pound a-head more money. The animals were visited by Deacon Williamson every month. The first three months the Shorthorn Crosses appeared to gain considerably on the polled, but when spring set in the polled shot fast a-head, with the result above mentioned. Pedigreed stock should be paid more attention to by farmers than they are. What are pedigrees doing in England, and America, and elsewhere, for the breeders and owners of Shorthorn stock? Why, giving them in some cases from one thousand to two thousand guineas for animals worth to the butcher only £30 to £40, and even less. I think that the Highland Society, and all the local agricultural societies in the country, should make a distinct rule that the test of an animal being a pure Shorthorn or polled should be the Herd Book of these breeds, and make it impossible for any animal to be exhibited in these classes at any show whose pedigree cannot be traced through the Herd Book. I hope this will be taken up and brought to a successful issue. In reference to the pedigrees of

polled cattle, I am very glad to see that the second volume of the Polled Herd Book is now in course of publication, by Mr. Ramsay, of the *Staffshire Journal*, and Mr. Adamson, of Balquharn, formerly a pupil of the honourable member for West Aberdeenshire—gentlemen who, I am sure, will do justice to the volume. But it is to be regretted that some of the breeders have not taken that interest which the breed deserves, in getting the pedigrees of their stock completed and connected with the first volume, as, if the Herd Book is to be of value to the herd, this must be eventually of the utmost concern; in fact, so much so, that I hope to see the day very soon when breeders will decline to purchase any animal, however good-looking for breeding purposes, that cannot trace descent through the Herd Book in one unbroken line. The breeders of pure polled stock must also never breed from a cow, although herself pure bred, that has at any time been served with a Shorthorn or other than a polled bull, as I am convinced, from experiments with dogs, that such will affect the purity of the breed. As an example of the great care required in breeding pure breed of one colour, I beg to state a circumstance that came under my own notice a few years ago. My father had two heifers, two years old, which is the age at which they are first served. They were great favourites, and had been picked out to go together. They came in season, and were both served in one day. Shortly after, a strange black and white dog passing got amongst and frightened them, and the consequence was that they produced at the proper time a calf each, marked as like as possible, and almost spot for spot, with the dog. They happened to be both bulls, and they were soon castrated. Although the fashionable and proper colour of polled cattle is black, yet it sometimes happens that one appears with a brownish tinge, and I have seen others quite red. I think a good many of the old Buchanan "doddies" were red, and a good many of them brindled. These are generally of a good quality, and excel in milking qualities. To keep up the strength, character, and quality of a breeding stock, a judicious blending of the tribes and introduction of strange blood is occasionally necessary. But care should always be taken to get such of undoubted purity, and not to use any bull in the herd but of good blood and pedigree. The question of breeding in-and-in has been the subject of some discussion lately. I think it may be, and has often been, done to advantage; indeed, in several instances quality and neatness have been obtained, and an inclination to coarse, rough bone prevented, to my knowledge, by in-and-in breeding. But it should only be the exception and not the rule, and may as often be attended with bad as with good results. It is impossible, I think, to give any guide to go by as

to when it should be or should not be adopted, as it is purely experimental. I think the tendency amongst farmers is to confine young stock in winter too much. The great bulk are tied up; but I think they will grow and thrive better at all times if kept in loose boxes or warm straw yards with plenty of warmth and ventilation. Especially will this be apparent after they are put to the grass; and I think landlords should, in building new steadings, see that some part of the cattle accommodation is devoted to loose boxes, capable of holding a limited number of animals in each. I shall now make a few observations on the treatment of breeding stock. Bulls should not be kept fat, but in good fresh condition, and cows the same. The rule in my father's herd is to pay particular attention to keeping the blood of the cows in good order, and with this object, for a week before calving, she gets a dose of nitre each day—say about two ounces dissolved in a bottle of cold water. The third day after calving a purge is given, composed of 12 oz. of Glauber salts, 4 oz. cream of tartar, 2 oz. nitre, and 2 drachms ginger in powder, dissolved in boiling water, and this administered milk-warm in the morning, two hours before food, which should only be up till mid-day—or a little hay, with water *ad libitum*. This dose is followed by a similar on the seventh day after calving. These doses purify the blood, and greatly assist the cleansing of the cow. The same dose can be given along with bleeding, with good effect to cows or heifers, to induce them the more readily to conceive after copulation. If possible, all calves should be suckled, and when weaned are taken not to allow the calf beef to disappear. Cake, or other artificial food, ought to be given for some time for this purpose. In conclusion, I may be allowed to mention here, what may not be generally known, a wonderful cure for red water in cattle. I got the particulars of it from the late Mr. Thomson, of Banchoory, and it has been in our district of very great use, never failing when properly applied. Mr. Thomson, when travelling in Italy, got the particulars of the cure from a shepherd of that country, and on his return home he handed them to Mr. Charles Davidson, druggist, Aberdeen, who can supply all and sundry with the cure. I believe Mr. Thomson was anxious to try it on some of his own stock before offering it to anyone else, and said he was very much delighted one morning to be told that a young cow of his had got the red water. This animal was successfully treated, and was cured in a few hours. I think, in districts where this disease is prevalent, no owner of stock should be without the remedy. Before I sit down, I beg to thank you for your kindness and attention in hearing these few imperfect remarks so patiently.

SHEEP BREEDING IN NEW SOUTH WALES.

The following lecture was delivered by the Hon. G. H. Cox, M.L.C., before the members of the Agricultural Society of New South Wales:

The animal on which I am about to lecture, although insignificant as compared with those previously discussed, the horse or the ox, is nevertheless, of far greater importance to this community than both the other classes combined. I do not intend to enter into a dissertation upon the introduction of the merino sheep into this colony, nor trace step by step the increase in numbers and corresponding increase in wealth which its introduction into Australia produced. This may be learnt from the able article that appeared in the official report of the late Intercolonial Exhibition, written by Dr. Garran. My aim will be to show, as far as I am able, the extraordinary results which would be obtained by a more careful attention to the true principles of breeding, and the carrying out in a common-sense manner the dictates of Nature. I believe that much more attention was paid to the production of fine wool some twenty or thirty years ago than at present, or at any rate up to within the last three or four years. After the discovery of gold in Australia, meat became an article of so much value that wool was comparatively neglected for the sake of mutton. Hence the culling that was invariably made hitherto year by year was abandoned, and nearly all the flockmasters throughout the colony bred indiscriminately from anything in the shape of a

ewe, with the idea of increasing their number, and used any large framed ram he could get for the purpose of adding size and weight to the increase, regardless of the quality or quantity of the wool which grew upon their skins. What still further aggravated the evil was the fact that, even this inferior wool thus produced continued to realise high rates, owing, I presume, to the great impetus given to trade consequent upon the numerous influx of the precious metal into the manufacturing centres of the old world, from California and Australia. The large fortunes made by squatters (and wool-growers especially) induced a number of young men to embark in so apparently profitable an undertaking, and as many of them were utterly wanting in experience, they bought indiscriminately any sheep that were thrown into the market, and still further helped to bring about that rapid decline which was taking place in our staple production. The most disastrous results quickly followed. Wool declined in value, the price of meat fell, and sheep were depreciated in value to such an extent that, in many instances, squatters could not give them away, after having cost their owners, with the expense of forming new stations, some 20s. or 30s. per head. I have thus endeavoured to trace the causes which led to the decline of the article now under discussion, and I shall now attempt to show how the defects of previous years may be remedied. The first step then to be taken is for flockmasters to class their flocks, and to resolutely

throw out all animals that are unfit to breed a good fleece of wool, and fatten them off at once. For, on the old adage, that like begets like, so surely will these half-covered worthless animals perpetuate their own bad qualities. It would take generations, even with the help of first-class rams, before the flockmaster could turn such unprofitable sheep into good wool-producing animals. There is one thing that must have struck even the most unobservant person in these colonies, and that is that in our vast extent of territory, comprising almost every description of soil as well as climate, people should be found endeavouring to breed the same class of sheep on the cold and table lands of the great dividing range as on the hot and arid plains of the interior. In the comparatively limited area of Great Britain how many distinct kinds of sheep do we observe, and the farmer there would no more think of breeding or grazing the large framed Lincolns on the Yorkshire wolds or the Welsh mountains, or *vice versa*, the mountain sheep in the Lincolnshire or Cambridgeshire fens than he would think of growing tobacco or sugar cane; while here our flockmasters think they can produce the finest merino wool on lands and in climates which are totally unsuitable for that beautiful material, in spite of common sense and the inexorable laws of Nature, hitherto, we must admit, with but little success. For the production of the finest merino wool (combing or clothing) sheep require a moderate elevation and a temperate climate; an excess of heat or cold, or even an excess of wet, are all equally detrimental to the production of this description of wool. Combing wool has, I believe, a more limited range than fine clothing wool. Like wheat, it will not grow to perfection without good sharp frosts in the winter, when Nature provides a suitable covering. Excess of cold, on the other hand, makes this coarse, approaching the character of hair, while heat makes it light and frizzy like a negro's head. The area in New South Wales suitable for the production of this wool is undoubtedly that lying immediately to the westward of the Great Dividing Range, with some few exceptions, notably the country drained by the upper tributaries of the Clarence, Hunter, and Hawkesbury rivers. On the eastern fall in these regions I believe the most profitable wool to grow is what we call first and second combing, and to show the profit to be derived from this description of wool, I will state what I believe to be an average return of our Mudgee flocks, where this wool is chiefly grown. I take the average weight of fleece at from 2½ to 3lbs., and by last account sales the prices of the various brands averaged from 24d. to 31d. per pound; this will show a gross return of from 5s. to 7s. 6d. per sheep, say £325 per 1,000; deduct cost of shepherding, washing, shearing, &c., £120, leaving a net profit of £205 per 1,000 sheep. Of course, to have obtained these results a large outlay has been made, and years of attention to breeding have been given; but where these have been judiciously and carefully made, the results are even more marked, as the amounts realised by the sale of stud sheep considerably exceed the above handsome returns. The Mudgee wool has a character peculiar to itself. Its great characteristics are softness, strength, and extraordinary elasticity. Instead of the wave or curve which all wool possesses in a greater or lesser degree, our Mudgee wools have a curl almost like a lady's ringlet, and hence its great elasticity. It is not a favourite wool with English manufacturers; they call it a bastard wool, neither one thing nor the other, neither combing nor clothing; but on the Continent, and particularly in France, it is held in high estimation, and eagerly competed for. I would condemn very severely the practice of many sheep-breeders in continuously importing foreign blood into their flocks. Our climate tends to promote a softness in the wool—a quality which is almost wholly wanting in the German or Spanish merino; and by crossing with foreign blood you are fighting against Nature instead of assisting her, and the consequence is a mongrel type of wool, wanting in many of the elements of the pure Australian merino. Mr. Thomas Shaw observes: "The climate of the Australian colonies is as much superior to that of all others for the growth of fine wool, possessing every manufacturing quality, as that of England for the production of coarse wool. It gives the milling quality equal to Spain, and the softness equal to Germany. The wool grown by sheep properly acclimatised, and which have become truly Australian in character, possesses the good qualities of wool grown in both those countries, without the defects of either. It makes cloth as substantial

and useful as the Spanish, and as rich and ornamental as the Saxon. This is a great advantage, and I believe I am right in asserting that the Australian combing wool is the most valuable in the world. Although stuff goods were *first* made from German wool, Australian combing wool has been proved so far superior, that, could a sufficient quantity be obtained to suit the requirements of the trade, not a single pound of German wool would be used for that purpose. But these combing qualities must be bred for. It has here been shown what influence climate, unaided, has upon some qualities of wool, and the necessity of producing other qualities by artificial means. It is the nature of the Australian climate to produce fine wool to great perfection, communicating a superior degree of milling quality and softness; but length and soundness of staple, fulness and freeness of fibre, an essential in combing wool, we must breed for. If I am wrong in any of the above remarks, I shall be most happy to be corrected; if right, the absurdity of a continual importation of foreign staple is sufficiently apparent. The climate of Australia, as I have before stated, is superior to that of all others. Wool grown by sheep judiciously bred under its influence possesses all the essential qualities in a far superior degree to all other wools. What good can be obtained from foreign sheep I cannot conceive; but the evil effect produced is, in my mind, beyond all question. If we introduce German sheep, we injure the milling quality; if Spanish, we destroy softness, and it will take at least two or three generations to redeem these qualities. If the sheep imported are English, we destroy all these good qualities at once, and the only redemption is the butcher; it is like engrafting a crab on an apple to improve its flavour. We hear a great deal said about breeding in and in—every defect is attributed to this. I think, without any close investigation, it will be found that the evil lies in breeding out and out. There may have been cases where family blood has not been sufficiently renewed; but the great bulk of the mischief done, and the cause of the numerous defects in flocks, are bad selection, the importation of sheep not suited to the country, and injudicious crosses. I believe that in sheep, as in cattle breeding, the only scientific and certain method of accomplishing the end which the breeder may have in view is by in and in breeding. This, with a system of small paddocks, to be used at tupping time, where a limited number of ewes of a certain class may be placed with a single ram, also of a particular character, the capability of the ram for transmitting his good qualities to his offspring may be fairly tested. The practice now so generally followed of putting say a score of rams, to half as many hundred ewes, is invariably disappointing in its results, because all breeders know that, however good an animal may be, it does not necessarily follow that his progeny will be good. Sometimes an inferior looking ram will beget very superior woolled lambs. I hold that results similar to those I have stated as prevailing in the Mudgee district, may be obtained over a large portion of New South Wales. I am aware that in stating this I am looked upon as guilty of holding heretical opinions, and have been taken to task for giving expression to such heterodox ideas, but notwithstanding, I contend that on the whole of the "western slopes," extending from Queensland to Victoria, as coloured on the map (and from which the so-called "Mudgee and merino districts" have been very improperly excluded), sheep as good as ever were bred in Mudgee may be produced. Of the "coast and mountainous districts" I need say but little, as on the former the merino will not thrive, and in some places not even live, as on the swampy plains and moist atmosphere of the Clarence and Richmond rivers; while on other parts, as the Lower Hunter and Illawarra districts, the coarse English sheep only appear to do any good. On parts of the high table lands of the coast range sheep cannot live through the winter, while in other portions a coarser description of the merino appears best adapted to find sustenance on the sour grasses, and to withstand the inclement weather of those inhospitable regions. On the country marked "intermediate" a somewhat similar description of wool may be grown as on the "western slopes," wanting, perhaps, in softness, and, in many instances, not capable of being so well got up, owing to a want of water and the prevalence of dust; while on the great salt bush plains of the interior a combing, or even a fine clothing, wool cannot be grown. For the production of fine combing wool you require a mild climate, without extremes of heat or cold; you do not require rich pasture, but you must have abundance in all

seasons. Now, are these requirements to be found, as a rule, in the saltbush country? There you will experience, at any rate, extremes of heat; at one time sheep will be surfeited with a superabundance of exceedingly rich pasture, at another they must subsist upon dry withered grass, or even shrubs, and at the same time be living in a cloud of dust. Now all these phases through which the sheep pass, tend to the destruction of the characteristics of combing wool. A superabundance of rich feed at one time, and utter absence of all such at others, tend to the uneven growth of the fibre, and causes stricture. Again, the excessive heat, together with the dust, dries up the yolk, and for want of nourishment the wool perishes; dust accumulating on the skin prevents the rising of the yolk, and precisely as a barked tree dies for want of sap, so does the wool perish for want of its natural support, and hence becomes unsound, and, of course as such, unfit for combing purposes. When the great saltbush plains shall be irrigated, and when the sheep that roam over them shall be protected from the ferocious summer sun by thatched sheds, then, and not till then, shall we see combing wool grown in the great fattening country of Australia. To prove my assertion, I would ask in what country in the world, where the thermometer may range in the sun to 150 deg., is combing wool grown? Do we find it in India, Egypt, or South America? No. We may find clothing wool (though not fine combing wool) in the other extremes, as in Iceland; but I challenge my friend Mr. Bruce to show me where combing wools are grown in tropical or semi-tropical countries. Of course, I admit in isolated instances, or under peculiar circumstances, such may be the case—you may grow

pinapples at the North Pole, and you may grow combing wool on the Darling river. I may be asked, what then are sheep breeders in this great area to do? I answer, let them intelligently consider the capabilities of the country in which they reside; endeavour to find out what Nature tends to produce, and then assist her by striving to grow the best that the peculiar circumstances of the case will admit; precisely as the intelligent inhabitants of the mountains in Wales, or the Highlands of Scotland, endeavour to develop to the utmost the best qualities of the animals they find most suitable to the localities in which they reside. If the sheep farmers of New South Wales cannot all grow a Mudgee wool, they can, at any rate, produce a good, profitable article, and cover the wretched, scantily-clothed animals they now possess with double the quantity of wool they have at present. Were the fleeces of New South Wales increased in weight only to the extent of half a pound, and in value to the amount of 3d. per pound—and I presume that no one will deny this may be obtained without a very extravagant estimate of the capabilities of the country—we should have the astounding result of an increase of wealth to this colony of three-quarters of a million per annum; while the increased capabilities of the country which might be developed from fencing and ring-barking, especially in the mountainous parts of the country, are incalculable. It would be beyond the limits of my lecture to enter upon these matters, or the getting up and classing of wool; in fact upon this last thing alone a long lecture might be delivered, for it is a question of vital importance to the wool-grower, not only to grow good wool, but to send it to market in the best possible condition.

THE LABOURER'S HEALTH AND DIET.

At the dinner of the Romsey Labourers' Encouragement Association, at which the successful candidates were present, the Honourable W. F. COWPER-TEMPLE, M.P., the President, said:

There was no better drink than water, although it might not be quite so popular as beer. Some people could not get on without beer, but some found that water was the most congenial and refreshing drink a man could possibly have. Still, whether they took water by itself, or mixed with other things, it was quite as necessary that it should be pure and uncontaminated. Some things—such as Bass' pale ale—owed its good qualities to the water, for this ale was brewed with water which was very pure and soft. The necessity of looking after their water in the wells and other places was therefore of the utmost importance. Then with regard to the things consumed next to water came milk, which contained all the elements necessary for the nourishment of the body, especially those of young children, and to them it was absolutely necessary. It was a very great advantage to children in a district where they could have a supply of milk. It had often been remarked that the children in the rural districts did not look so well as those in provincial towns, and he believed the reason of this was because in the former they were a long way off from the milk, or their parents could not afford to get it, while in the towns they were close to where it was retailed. Several of the farmers in the neighbourhood of Romsey, and who lived on his estate, had been kind enough to take the matter up, and had made arrangements by which milk in small quantities should be sold to the families of the labourers who were working on their estates. This was an example which would be more readily followed if people could see the great importance of children having a proper supply of milk. On the proper feeding of the young depended their condition in after life. He did not care so much about their wealth, their minerals, or the production of their textures and fabrics and machinery, for what was the wealth of the country when compared with the health, the strength, and the moral integrity of the young people? Therefore everything should be done to improve the health of the children while they were young; for while they did this they were not only benefiting them, but they were contributing to the general welfare of the country. He thought a great deal might be done with regard to the health of the people. With reference to the cottagers he did not observe that the wives did as much with the vegetables in the

garden as they might. He did not discover that the labouring man, after his hard day's labour, went home, sat down by his fireside, and had a basin of warm soup. He could assure them that this often sent a man to his bed warm and comfortable, instead of his merely having his bread, and in this respect the people in England did not quite come up to those in foreign countries. If they went across the Channel—to France—they would see that the vegetables were made into a most agreeable soup, and which proved a very great comfort to the whole of the family. If the wives only understood the cooking a little more it would conduce to better health. Then there was another thing which he noticed in cottages in this country, and it was that great pains were taken to keep out as much fresh air as they possibly could. People might say it was done to keep out the cold, but that might be done without excluding the fresh air. There were many people who really were not aware that fresh air was necessary in order to enjoy good health. They did not know that fresh air invigorated the system, set the blood in motion, and promoted health and strength quite as much as solid food. And then, when talking about health, their minds naturally reverted to the great quantity of illness and disease produced by the intemperate use of fermented liquors. If they went to Winchester gaol they would find that two-thirds of the people who came there had been brought by the intemperate use of fermented liquors. If they went to the workhouse he was afraid they would find a large number were there from the same cause. They found it the same in their lunatic asylums, and, go to whichever quarter they liked, they would find that the health of both body, mind, and soul had been more deteriorated by the injudicious and intemperate use of fermented liquors than anything else. In the remarks he had made about the wives he wished it to be understood that he did not in any way find fault with those in that district. He was only giving them a few ideas which crossed his mind, and he must say that the wives and mothers of the working classes round about them were deserving of great admiration for their industry and the self-sacrifices they made in order to rear up a large family, to send them to school, and to make their homes comfortable for them. But still at the same time it was well that they should know how some other people did things, and then try and see if they could not learn something from it. Among the friends of health he did not know of any who were more conspicuous than the little birds they saw flitting about in

the hedges and trees, and who were formerly considered such great enemies. At one time they were considered so bad that they used to be charged in the church rate for so many heads of sparrows which had been killed. But a little inquiry had brought out how very necessary they were for the health of man, because they kept away those noxious insects which would otherwise multiply so fast that they would eat up the crops round about them. In France there was an unfortunate mania to kill all the small birds with popguns and small pistols, and the result of this was that the vines were destroyed by the insects as soon as the birds were gone. Another year they had flies, gnats, and grasshoppers so numerous that the people began to inquire whether it would not be prudent to preserve the birds. In America they found the want of sparrows, and they saw France and Germany sent to England to be supplied with them in order that they might preserve their crops. In looking at the list he found there were a number of useful and

very deserving persons to whom they had given premiums. The President then alluded to each class separately, pointing out the value of good shepherds, teamsmen, ploughmen, and such like, and concluded by saying that in the bishop's present of a Bible they had a proof of the interest his lordship took in the society, and they had before them men who showed no ordinary amount of skill as farm labourers, and men whose moral qualities and religious bearing were such as to make them bright examples for younger ones to follow. He had only to say that farm labourers who really understood their business, who took pains to do that which was right, who were conscientious in the discharge of their duty, whether under the eyes of their master or not, who took a real and conscientious pleasure in doing the thing that was right, strove to discharge their duty in the station in life in which they were placed—such men as these were by no means common, and he sincerely wished they were more numerous.

THE WADEBRIDGE FARMERS' CLUB.

At the annual dinner, when there was one of the largest attendances ever known,

Mr. TREMAYNE, the chairman, said: The ballot will not abolish bribery and corruption, for we have the evidence of other countries to show that there are people foolish enough to give money, and people wicked enough to receive it even for votes that are to be given in the ballot-box. I think it will also lead in a great measure to the virtual disfranchisement of many places, because it will remove that interest which many people now take in politics, for a knowledge that the vote is to be given in an underhand way will induce people to be careless and indifferent about it. But at the same time I believe the ballot will remove that which is the great social blot of our electoral system—I mean that horrible system of intimidation and coercion—that system by which landlords, agents, and employers drive their tenants, their workmen, and those who are in any way connected with them, to the poll, and oblige them to vote probably in exact opposition to the dictates of their own consciences. To my mind there is something so humiliating, so infinitely dishonourable in it, that I think the ballot, objectionable as it is for many reasons, should be tried even if it only remedies that one abuse. Another matter to which I desire to refer is the way in which the landed interest is represented. I cannot but feel that in comparison with the towns the landed interest possesses a far inferior share in the representation. Take, for example, the statistics of this county. There are seven boroughs in it, returning nine members to Parliament, and they contain, roundly speaking, about fifty thousand inhabitants, while the county contains three hundred thousand inhabitants, and returns only four members. And if you take the rateable value of those boroughs and compare it with the rateable value of the county, the discrepancy is still more evident and remarkable, and I think it must be plainly visible to everybody that the county does not possess that full, proper, and proportionate share of representation that the towns do. I hope to see this question of electoral districts taken up early in the coming session by men on both sides of the House of Commons, for I cannot see why anything that will tend to promote fairness, equality, freedom, and purity of election should be treated as a party measure; and I trust that it will be taken up in a public spirit by men who will carry it through for the public welfare.

Sir JOHN TRELAWNY, M.P., said: We had the Irish Land Bill, and I was one of those who thought that the principles of political economy were outraged in that Bill. I was afraid that the consequences might be injurious, but you must recollect that man does not live by bread alone, and that the statesman who leaves out of consideration human feelings and emotions, and merely considers political economy, would not know his business, and would very likely bring the country, into perils and disasters. The Land Bill may not have been right with regard to taking away the power of the landlord to contract with his tenant, but the landlords of Ireland, after all, are not to be so very much pitied when it is found that

the poor fellows can only get in some instances just fifty years' purchase for their land. Things, no doubt, may be said respecting this measure which might make you disposed to receive it with disfavour; but, on the whole, you must remember that the Ulster Tenant-right had been long in existence, and that it was hardly possible it should exist in one part of Ireland and that there should be no desire to adopt it in the other part. For some considerable time previously the question of Tenant-Right had been constantly agitated; bills upon bills were introduced; it was perfectly clear that some measure on the subject must eventually be passed, and when this Bill came upon us for an ultimate decision I could not tell how, under a due sense of responsibility, I could do anything else than give my support to it. You must allow time for discussion, but, at the same time, I do not say that we ought to rest contented very much longer without a settlement of certain questions in which you are interested—I mean as regards the mode of levying and dealing with the rates, so that those who have to pay them may be satisfied that they are dealt with in a proper manner. We have to complain that a measure in that direction has not yet been sufficiently elaborated and passed, although a most painstaking Minister—Mr. Goschen—endeavoured to produce a comprehensive measure. It was not, however, altogether satisfactory to the agriculturists, but if you bring your criticisms to bear upon it I dare say it is quite possible that it may be made the basis of a measure in the next session of Parliament. Sir John then briefly referred to the Game-laws, expressing opinions similar to those which he propounded on the previous day at Liskeard.

The CHAIRMAN, in giving "Success to the Wadebridge Farmers' Club," referred to the usually small attendance of farmers at Chambers of Agriculture.

Mr. R. G. POLLARD said that the agriculturists were constantly charged with being grumblers; but if there were any other classes of the community whose interests were so little attended to as theirs, he had no hesitation in saying that they would grumble with much greater intensity. The agriculturists had to contend not only against grievances that might have been alleviated, but they had also a succession of four dry summers, and he believed that during the last four years the Wadebridge district had suffered more from drought than any other district even in the country. In Cornwall alone, since the year 1868, the loss sustained by farmers in sheep was no less than 38,000, and in Great Britain the entire loss amounted to 3,000,000; consequently things could not have been so favourable for agriculture as some people might suppose, simply because for some time past meat happened to be realizing high prices. Speaking of the best form of agreement between landlord and tenant, Mr. Pollard said the system of tender was most objectionable, inasmuch as it was the means of drawing out fictitious prices and not a fair value. He believed that the system adopted by the Earl of St. Germans and the Earl of Mount Edgcumbe was far preferable, for those noblemen had an estate valued; they put a price upon it, and then looked out for a good tenant to occupy it. A tenant

should have security, and compensation for unexhausted improvements; and much improvement was required with respect to the relations that existed between landlord and tenant. The landlord should encourage the tenant-farmer by the erection of suitable and necessary buildings if the latter laid out his money in the purchase of feeding stuffs, which must be beneficial to both of them. Sir John Trelawny had told them that while the Government had put on four millions in taxes they had taken off nine, but who were the parties that had been relieved? He also told them that nothing had been done for the farmers, but that was a mistake, for something had been done for them, but it was quite contrary to what they wished or desired. Instead of relieving them from taxation, more had been imposed. With regard to local taxation, that was a subject which had been discussed over and over again, and they would never cease discussing it until they had obtained redress. They were quite willing to bear their fair share of the taxation of the country, but when more than their share was imposed upon them it was no wonder that they grumbled.

Why should the agriculturists have to bear the whole burden of local taxation, while the merchants and manufacturers, who were amassing immense fortunes, and who were constantly manufacturing paupers, did not pay one iota for their maintenance? The Club was in a thriving and prosperous condition.

Mr. R. OLVER advocated security of tenure, and thought that their leases at present were drawn up in a most peculiar and unbusinesslike way. He was of opinion that beneficial results would follow the adoption of a plan by which on every farm containing one hundred acres of arable land there should be at least two cottages erected for the labourers who were employed upon it.

The CHAIRMAN had come to the conclusion that no lease was better than a bad one; but he thought that an annual agreement was even preferable to a lease. There was one element required, and that was mutual confidence and good understanding between landlord and tenant. It must be a give and take business.

BOTLEY AND SOUTH HANTS FARMERS' CLUB.

At the January meeting, at Botley, Mr. William Warner in the chair, the subject for discussion was "Root Cultivation, with reference to the best intervals or distances apart for various roots, so as to secure the heaviest acreage and the best quality."

Mr. JAMES WITHERS, said: I may first of all state that it was entirely owing to the prizes awarded for roots by this club and others of similar kind which first led me to think of and to afford me an opportunity of forming an opinion as to the right number of roots required to the rod to ensure the greatest acreage weight. And thus, by comparing one field with another, with their respective numbers of roots, and their weights during a course of years and through various seasons, it assisted me in coming to a conclusion as to the right number of roots per rod to make up the greatest weight per acre. This is evidently one of the best seasons for a plant of all kinds of roots we have had for many years past; and it was possible this season to secure any amount of plants to a given space of ground; in fact, I do not know a season when a good plant of all kinds was so easily obtained. And in taking a survey of the root crop while passing from field to field, and from farm to farm, we might fairly expect to have seen one uniform system carried out with regard to the numbers of various roots, and the respective distances of those roots. This, however, is not the case for great irregularity prevails throughout the whole district. This was occasioned by the hoe in thinning or setting out the plants. I do not, by these remarks, condemn the hoe for this purpose, but, as thinning is necessary, it is also necessary that we should know how far such thinning should be extended. It seems at first sight to be a subject of very little importance, but when we find that some tons per acre are entirely dependent on the right number of roots, it also being often in the power of the hoers to leave any stated quantity, it must be of some importance to know what that quantity should be, in order to produce the best possible crop. At all events, it seems at present a subject very imperfectly understood, or very badly attended to, as within the district of our root show facts prove that the number of swedes vary from 80 to 150 to the square rod, and mangold and other roots quite as much, and also that small or few numbers seldom gained prizes. We will, if you please, first of all fix our attention on the swede cultivation, it being, perhaps, the most valuable part of the root crop. At some early period of our club, says eighteen or twenty years ago, it was often remarked that the swedes drilled at 24 inches seldom gained prizes, their acreage weights being too small, while those with rows of 18 or 20 inches most frequently did so. Experience of late years has, however, proved to me that the reason was not simply because they were placed too wide from row to row, but because the plants were too thinly hoed in those rows, thus leaving about 80 or 90 roots to the rod, where at least 120 or 130 should have been. And as the 24-inch rows now most frequently take the first prizes it must, I think, show to

us that the crop does not so much depend on the width of rows as on the right number of roots to the rod or acre; and it also goes to prove that the 24-inch rows have in past years been too thinly hoed, and if drilled wide between the rows the swedes should be left more thickly planted in those rows to make up the deficiency, or a loss in acreage weight will be the result. The greatest weight found by the judges amongst all the competing fields for prizes within 15 miles of Botley for the last year's root show for ten acres of swedes was a field of my own, which was drilled at 24 inches and 127 roots to the rod. The manure used was 3 cwt. of bone superphosphate, purchased of Mr. Spooner, and 60 bushels of ashes per acre. We sometimes, however, find that excess in numbers will produce a very fair crop; and we also find some cases were few numbers have done the same, and in comparing field with field we seem at time puzzled to ascertain which is right—whether the thin or the thick planting. And although both extremes have at times produced very fair crops, there is a probability that had the medium been adopted there would have been some tons to the acre more in both cases. And neither of the two is in my opinion right, it being better to avoid the two extremes, and follow that which has done the best through a course of years. I have, therefore, come to a conclusion as to the right number of roots, which for early swedes, in my opinion, is from 120 to 130 roots to the square rod, and those of later sowing might be 140. The 24-inch rows, at 12 inches in the rows, would yield 136 roots to the rod, and each swede weighing the small weight of 2 lbs. only would yield 19 tons 8½ cwt. per acre, or root at 2½ lbs. each would be 24 tons 5 cwt. and it is but seldom that we produce that weight. With respect to the numbers of roots I have for the present in my own mind settled that part of the question; but as regards the right way of placing the roots—as to whether they should be 24 inches one way and 12 the other, or 18 inches each way (as both would yield the same number of roots)—I am not so well prepared to give an opinion, but I am inclined to believe the latter would be likely to produce the greatest weight provided the horse-hoe could be used; but as 24 inches is the nearest to ensure good horse hoe cultivation, and we cannot afford to sacrifice the use of that implement, I must as yet give the preference to the 24 inches rows. We will now leave the swede subject, and turn our attention to the mangold. The plant of mangold was, or should have been, a good one, but we find in it the same irregularity of planting, or even greater, than that of the swede, varying in numbers from 80 to 150 to the square rod, and, although the thin planting will produce very fine roots, which catch the eye and appear very beautiful when growing, yet I do not believe that the extra size or weight of such ever compensate for the deficiency in numbers, and, even if they do so, I believe that three roots of medium size would, if analyzed, be found to contain more nutriment than two of the same weight. Moderate thick planting renders the roots more shapely, and are more easily

cleansed and prepared for the cutter, and with much less waste, and the same would apply to swedes and other roots. And I believe that mangold should be grown in numbers very nearly approaching that of the swede. I, however, have not been so large a grower of this root as our chairman and a few other members of the Club, and cannot speak with so much positiveness on this part of the subject. I should recommend the rows at 24 inches and about 14 inches between the plants, or about 110 or 120 roots to the rod; but this root, like all others, should be regulated in numbers, according to the time of sowing—the late somewhat thicker than the early planting. The turnip plant for the early part of the season should, in my opinion, be about the same in number as the swede, or about 130 roots to the square rod. But as the sowing of turnips is extended over a long period, the right number of roots must depend very much on the time of sowing, taking care to increase the number as the season advances, varying from 130 to 200, or even more; and stubble turnips, if hoed, should be from 260 to 300 to the rod, or at the least one to every square foot. I have more than once observed that where only part of a field of stubble, or any late turnips, have been hoed, those left unhoed have produced by far the greatest amount of sheep food, which was the effect of too thinly hoeing. Carrots, if drilled at 16 inch intervals, and from four to six inches between the plants, four inches would yield about 600 roots to the rod, and six inches would be about 400, and I believe 500 roots of carrots to the rod to be about the right number to produce the greatest bulk per acre in most cases. Cabbages and kohl rabi I will leave to others more experienced than myself. We find within 10 miles of Botley the range of our root show for the last season, that the swedes vary in numbers from 79 to 156 roots to the rod, and that 127 was the heaviest of all, and 121 the next heaviest acreage weights. The mangolds vary in numbers from 77 to 151 roots to the square rod, and 89 and 151 were the heaviest. The carrots vary from 400 to 800 roots to the rod, and 575 proved the heaviest. Thus we find there is a very wide scope in practice with regard to the numbers of roots and the distances of those roots; and as the few numbers, or thin hoeing, predominate, and seldom gain prizes, I believe that many or all of us have more or less been guilty of too thinly hoeing for some years past, and this affords me a place to say a word or two on this part of the subject. The hoeing business has very much to do with the root crop irrespective of numbers and distances. The work of both horse and hand hoe should be pushed forward as early as possible, and even in bad wet seasons it will not do to wait. Weeds will grow, and most in wet weather, and are much easier destroyed while in a state of infancy. Too much waiting for fine weather proved the bane of the swede crop in many cases last year which came under my notice; and many a field which promised well in their early stages became choked with weeds and stunted in their after growth, and the hoeing business was also rendered much more expensive from the want of earlier attention. Leaving the largest plants is another thing worthy of our notice. The difference in two men's work in the same field is sometimes very striking; one of whom, leaving the largest plants while thinning or setting out, and the other, regardless of such, more frequently leaving the small ones. This is another evil for which there is no after remedy. It is, therefore, evident that our practice with regard to numbers and distances embrace a very wide scope, and consequently afford a wide field for observation. I have very briefly introduced this subject, and have stated my views on it, and we as men of business should be able at all times to give, if required, some reason for what we practice. That much depends on the right number of roots on the land to produce heavy crops I feel certain, and as there must be among all the various numbers which I have stated some right one, I hope that the members present will freely give us the benefit of their ideas on the subject, in order that we may come to some conclusion as to what that number should be to produce the best results.

Mr. J. BLUNDELL said: Some people outside the Club had said, "Why the subject is very well understood; everyone knows what will be brought forward." Granting that was the fact, he must appeal to them whether, as members of that club, they would exclude the rising generation of young men, who were coming forward day after day as agriculturists, from a knowledge which some of those gentlemen claimed to possess. But they were living in an era when there was always some-

thing new to be learnt, and that was why the subject under discussion was of immense importance. When he considered there were something like 400,000 occupying tenants, he computed that during the last twenty-one years they had had about 20,000 new farmers added to the number of agriculturists every year. Then, if this was the case, why should they wish to deprive these young men of the knowledge which they possessed twenty or twenty-five years ago by shutting out such a subject as the one that day from discussion? Therefore Mr. Withers was to be commended for having introduced it, and he was a man of practical experience, as he had been a judge for several years at their root shows, and in that position they could always learn something. They had a chance of comparing the roots grown, the various methods of cultivation adopted, and learn things which it was always difficult to get hold of without one had practical observation. Coming more closely to the subject, he thought the points they had to look to with regard to the root crop were the distance apart they should have them in order to secure the greatest weight and of most feeding value, and also the hardihood of the crops, in order that they might withstand the great changes of our fickle climate. The all-important point which they desired in the cultivation of root crops, and it was a difficult one, was to learn the number of roots they should save per rod to give them the advantages he had named. Another point was they had not hoers in the present day who would take such pains as those did who were formerly employed. This was a matter of immense importance. With animals so it was with the roots. If they wished to have good animals they would select the best, in order to produce a good stock, and it was just as necessary in the hoeing out of turnips that pains should be taken to leave the best and finest in the rows, so that they might be able to produce a better crop. Therefore it was of immense importance that they should have the right number per rod, and that they should also press on the labourers who hoed the turnips to leave the healthiest in the rows. One question was whether they might not manure the land too highly, and, although they could drive the roots up to 20 or 30 tons by these means, still they might be less capable of withstanding the changes of the climate than others which were not forced by an extra quantity of manure. Mr. Withers had very properly observed that some few years ago they were satisfied with twenty inches between the rows and about 108 to 110 roots to the rod. But if they took twenty inches between the rows he thought they lost the advantage of interculture. Therefore he thought that if twenty-four inches were allowed it would leave 120 or 130 roots per rod. With regard to the turnip crop he would, generally speaking, follow suit with the swedes, and he believed they would have them thick enough if they had the rows two feet apart. Then with reference to the mangold crop they found that the heaviest weighted ones were those which were grown at the greatest distance apart, but he believed the same argument he had used with regard to the swedes would hold good with the mangold. If they had the larger size mangold they would find that they grew very rooty and lanky, and it made it difficult to prepare them for the cutter. He thought if the roots were grown in greater numbers they would be of better quality, although not so large, and thus the same rule would apply to the mangold as the swede. And there was another question with regard to mangold. Some twenty years ago it was proposed to give a prize for mangold sown late, and it was decided that they should not sow until after the 6th of July. That for a number of years was adhered to, and with very great success. He remembered taking a prize with some which weighed twenty-six tons to the acre, and they were of very good quality. The question was whether they could not have a good crop by sowing late as well as early. He had been told by a gentleman in the neighbourhood that he had been feeding his sheep off mangold which had not been injured by the very severe frost we had at the latter part of the year. Thus it struck him very forcibly whether they could not grow mangold of sufficient hardihood to withstand the changes of the season. There was a system by which he thought they might be able to do this. With sugar-beet they had to cover up the roots in order to preserve them, and as it was well known that the part of the root which was under the ground was of more feeding value than that which was above it he saw no reason why the mangolds should not be covered with earth. If they followed this and earthed them up he thought mangold might be left in the field with impunity to stand the chances of

the winter. He did not say they could do the same with swedes, but the mangold had a far higher value. They knew very well if the swede was frozen in the bulb it lost in quality. He did not think the same rule would hold good with the mangold, and he thought if they were earthed up they might leave them in the land with comparative impunity. The distance apart for the cultivation of cabbage was an important point. He thought they should allow a sufficient space between the rows to admit of inter-culture; for all sorts he should say two feet between the rows, while the smaller ones could be varied in the rows. They could be placed eighteen inches apart, and yet they would have a valuable crop. With regard to carrots they could grow them even if the soil was out of chalk. Then there was the distance, and a most important thing was to keep them clean, which was very expensive. He would take the same rule of two feet between the rows. He attached great importance to carrot cultivation, as he tried an experiment by excluding swedes on his farm for six years, and he grew carrots as the main food for his stock. And he would tell them that the earlier period for sowing them was wrong. He maintained that the 1st of May was the best time, and was much better than the last week in March or the first in April. And it was for this simple reason—that carrots would not vegetate and come forward unless the weather was sufficiently warm. Then, with reference to the number of roots per rod, Mr. Withers had spoken of 400 to 800. He remembered in Mr. Croskey's time, when he rented a farm of Mr. Gater, he not only had 900 roots per rod, but they were also of good average weight. Then came the question of cultivation, as they could not get the horse-hoe in between them, and then it also required a number of people to dig them up. He very well remembered that when he grew carrots his number generally used to be something like about 250, and then he had the advantage of inter-culture and a very heavy crop of large roots, while he did not have to throw away money by employing a lot of persons to dig them. He could not see a better plan than to grow them at wide intervals, and have about 250 roots per rod.

Mr. JOHN WITHERS had had much practical experience on the subject, having been one of the judges, and he agreed with what his brother had stated in his paper.

Mr. JAMES WARNER had also been one of the judges at their root show, and had therefore some practical experience in the matter. He thought it was of immense importance that they should endeavour to secure, not only as last year but continually, a succession of good root crops, whereby they might secure to the kingdom a large and good supply of meat, for according to the quality of the roots so in a great measure would the price of mutton and beef range. Speaking more in connection with the subject, Mr. Warner said he agreed in a great measure with what Mr. Withers had adduced, as two feet apart would secure a better cultivation of the land, but for his own part he thought that swedes sown eighteen inches apart in the drills and twelve inches in the rows would produce greater weight than if grown two feet apart and thicker in the rows. However, it was quite requisite that a man should use his own judgement in the matter, and act for the best according to the circumstances in which he was placed.

Mr. W. B. GATER said he at first thought the subject had been worn very thin and was become almost threadbare, but since he had heard the able paper of Mr. Withers, and the practical remarks of Mr. Blundell, he could find that there was some advantage in having the matter again brought to their notice, and that much new light had been thrown upon it. Much depended on the careful eye of their labourers in hoeing, and with regard to the distance he thought the medium was to be preferred rather than the extreme of either the width or the closeness between the rows and the plants. There were cases when the cultivation should vary, but this was the exception rather than the rule.

Mr. SPOONER said: With all due deference to the opinions expressed by those outside, he thought the question was a very practical and proper one to take up. His object in getting it brought forward was to see whether, by eliciting the opinions of those who were competent judges, they could not come to a conclusion on the extremely difficult point as to the proper number of roots per acre. It had been held that a smaller number should be left, but Mr. Withers was generally in favour of a larger, and he (Mr. Spooner) was never more struck with this idea than when he considered the large number of roots that were destroyed by means of the hoe. He could not give

them a better illustration of this than by relating what took place with regard to some plants of his own. He had a small piece of swedes of about two acres, and he certainly never saw a finer lot of plants, there not being a single foot of the drills but what contained a swede. He therefore thought that they would agree that here there certainly should not have been any deficiency. But this was not so, however, and they were diminished by a large number by the manner in which they were hoed. In going round the field he began to count, and there were intervals of eighteen inches, and in a number of places two feet, without a single plant. Now, he knew how this came about, as he had gone over the field himself, and he could say that there was not an interval of six inches without a plant, and therefore it was self-evident that a large number had been destroyed by means of the broad hand hoe so generally used. Nothing could be more convincing than this. The men thought they had left plenty of roots no doubt, but there were only enough to give twenty tons per acre. The deficiency was quite seven or eight tons, and this was caused by the reckless hand hoeing. With regard to mangold he tried a piece with half a dressing of dung under ridges, with some artificial thrown over broadcast, and men were furnished with a stick fifteen inches long so that the seed might be dibbled in at that distance. In the ordinary state of things he anticipated that it would have produced something like 100 roots per rod, as they were planted at intervals of twenty-seven inches between the rows. After the hoeing there were but about 80 roots per rod, and about 33 tons per acre, but he thought the judges would agree with him that if the proper number of roots had been left in there would have been five or six tons more per acre.

Mr. JOHN WITHERS: Quite as much as that.

Mr. SPOONER: With regard to carrots he thought they ought to have four times the number of roots per rod than mangold. He drilled in his carrots twice in a place. The rows were about a foot apart, and he believed produced upwards of 500 roots per rod, and 28 tons per acre. He thought hand weeding for carrots better than hoeing. At any rate his were not hoed. He believed about 110 roots of mangold per rod and about 450 of carrots would be something like a legitimate number. Of course there was an objection to placing carrots at close intervals, as there was the expense of weeding them and getting them up. He did not think, however, much of the expense of weeding as that of getting them up. He thought kohlrabi should be left thinner than swedes. He was talking last Saturday to a large root grower in Dorsetshire, and he was a strong advocate for having them thick. In Scotland he also observed that in very many fields the turnips were twenty-eight inches apart in the rows, yet there they grew quite as many roots per rod as in England, and he believed this accounted for their having such remarkably good roots, and especially swedes. He believed Mr. Withers was quite correct when he said that by having the roots thicker in the rows they could have a proper number per rod, and consequently a better weight per acre. He thought if more attention was paid to the cleaning of the crops and a more careful hoeing it would be very beneficial. Whether it would be better to employ women and children in the first instance he would not say, but he believed it would be more desirable to have the plants hand weeded rather than that thousands of plants should be destroyed through the negligence of the labourers in their desire to earn a little more money. They found that the past season had been favourable for large roots, but that these did not come from the places where there was a large acreage—only from the spots where there were a few roots. They seldom came from where the acreage prizes were won. He might mention that last year they had as much rain in the three months which were so conducive to the growth of roots as they had in any other six months. The rainfall had been about thirty inches—about six inches in the other quarters, and twelve inches during the months of August, September, and October. The last two months particularly it was excessive. He did not mean to say but that the root crop might have been better with less rain, but it showed the importance that there should not be a long interval with out rain. With reference to mangold he believed that the manure should not be close to the seed, but with the swede it was different. He believed the subject they had discussed was not only of interest to members of the Club, but it was also of importance to those who were outside and the community in general.

The CHAIRMAN thought the paper and the remarks which had followed it had shown that the subject was not so fully understood by all as it had been made out, and that when the roots had been left in the hands of the labourers it had often turned out unfortunate for them. The year before last he was very much dissatisfied with his root crops, and he determined not to allow his men the use of the broad hoe. He sent into Southampton, and had some made varying from five to seven inches, and he made his men use them. He had gone into a calculation, and he found it would be much more desirable that the roots should be left thicker. Some rows were left eighteen inches and others two feet apart, with less intervals between the plants. Probably the roots left at eighteen inches would produce the heaviest crop, but a great deal depended upon the cultivation, and he thought, as being a fallow crop, there was an advantage in the two feet distance. By this they had the advantage of cultivating the soil and of keeping the crop clean. He quite agreed with Mr. Withers that the planting of mangolds and swedes the distance apart he had named would produce the heaviest crop and also the best quality. They all knew mangold was a very greedy feeder, and therefore if they gave them too much manure and space they would deteriorate;

their object should be to distribute the manure so as to have not only an average weight of roots but also of good quality, as he thought that was the principal thing they desired with reference to the root crop. Mr. Blundell had alluded to the growing of mangold which should stand the winter. In sowing mangold to stand the winter they should take care that the plant should be able to retain its feeding qualities, and therefore they should be careful as to what manure they used.

Mr. JAMES WITHERS having replied, the following resolution was submitted and agreed to unanimously: "That in the opinion of this meeting, in order to secure the heaviest acreage of roots and of good quality, it is desirable to leave a larger number of roots per rod than is usually considered sufficient; that swedes may be recommended to be grown two feet from row to row with intervals of 12 to 14 inches between the plants; that mangold may be grown two or three inches wider in the rows, and turnips somewhat closer, according to time of sowing, whilst carrots should be left about four times as thick as mangolds."

Votes of thanks to Mr. James Withers for his paper, and to the Chairman, were passed.

STAINDROP FARMERS' CLUB.

At the annual dinner, Mr. T. F. Scarth, president, in the chair, Professor WRIGHTSON delivered an address on the Obstructions or Hindrances to the Development of Agriculture. He said:

I propose to treat this subject briefly, and at the same time, to touch upon the most important obstructions which retard the progress of agriculture. No one disputes that agriculture is developing rapidly in this country. Our knowledge, our appliances, our live stock are all improving and extending, and this is frequently made a matter of congratulation when landlords and tenants meet. It is not in these particulars that the shoe pinches. Agriculture is a growing child, rapidly becoming too large for his clothes—or, to use another simile, a vigorous duck which must break the snell which has hitherto cramped her. I am not in the least afraid for Agriculture, if fair play is allowed her; but so long as a dependent and trammelled tenantry exist, so long shall we have knowledge and appliances contending in vain with what may not too harshly be termed obsolete feudalism. Never will the agriculture of this country be fully developed until the same principle is adopted in the country as has already become the rule in towns. Towns are the centres of civilization. It is there that intelligence is sharpened by keen competition and the constant intercourse of men with men. It is from the towns that enlightened views find their way into the country. Let us, therefore, endeavour to secure the same liberty in the country which is already enjoyed by the townspeople. Landlord and tenant, master and servant, are words of old standing; but every year they are altering in precise meaning, and ideas of feudal superiority must eventually wane and vanish. Whether you approve, or whether I approve, of the change are small matters. The peculiar tendencies of the age, more or less democratic in their character, are progressing with irresistible force, impelled by causes over which we have no control, and I trust for the general well-being of the community, if not of every class viewed separately. Liberal ideas, with regard to every relation between landlords and tenants, have been gaining ground of late; but there are objections urged by the more Conservative section of the agricultural community, which are worthy of attention. First, there is the general and right feeling that the landlord's interest must be considered as well as the tenant's interest; and this is perfectly true. No system of tenure, or Tenant-Right, ought to interfere with the legitimate rights of property; but, at the same time, no laws of property should be tolerated which exert a decidedly injurious effect on the community at large. Nay, further, where the good of the public is involved it may, as in the case of railways, water companies, thoroughfares, nuisances, &c., be advisable to control and curtail the powers of property owners. To my mind, no doctrine is more dangerous and ungodly, than that a man has a right to do what he will with his own—independent of the consequences to others.

Happily we are becoming more enlightened, and we are learning that property has duties incumbent upon it as well as rights. With regard to the subject before us, let us take a rapid glance at our rural economy. England is the theatre of wonderful agricultural activity, and its landed economy, lying as it does at the foundation of all relations among agricultural classes, must be worthy of attention. First, then there are the landowners holding, in comparatively few hands, the greater part of the land of the country. Next, we have the tenant farmers occupying the land and supplying the capital necessary to work it. Lastly, the labourers, upon whom devolves the actual tillage of the fields. The estates of the landed aristocracy are so extensive, that the idea of their owners cultivating them is precluded; and unless legislative acts, directly interfering with the accumulation of large tracts of land under one owner, are passed, we must allow that the lands of England will continue to be farmed by tenants. Now I hold that the nation, as well as the farmers, have good right to demand that this inevitable division of capital and labour, represented by the relation of landlord and tenant, should be so arranged that the produce of the soil should not be thereby diminished. They have a right to ask whether, in the present state of the law, any serious obstructions exist in the way of good cultivation, and, if so, whether the difficulties in the way of removing such obstructions are insuperable? I unhesitatingly answer there are still in force antiquated laws and vexatious customs which tend to keep men of capital out of agriculture; to limit the amount of produce, and to depreciate the value of landed estates. Without, therefore interfering with the legitimate rights of owners, it would be well to take into consideration the rights of occupiers, since it is to them the nation must directly look for its supply of food. I have written down nine serious difficulties with which the British farmer, and with him the consumer, has to contend, and I think it is of especial importance that the sympathies of the consumer should be enlisted on our side. 1st, insecurity of tenure; 2nd, want of proper compensation for unexhausted improvements; 3rd, want of capital both among landlords and tenants; 4th, want of sufficient education on the part of farmers; 5th, game; 6th, entail, primogeniture, and, in general, the state of our land laws; 7th, the condition of the labourers; 8th, the relations with the landlord, political and otherwise; 9th, the law of distraint and hypothec.

INSECURITY OF TENURE.—Could anything be more unsatisfactory to a manufacturer than to work under a six month's notice to quit, and liable to the confiscation of a very principle portion of his capital? Such is, however the condition of the farmer. As a consequence, he takes care to so employ his capital that he can withdraw much the greater part of it within a very short time. This is one of the chief causes of so much bad farming, the occupiers not being so foolish as to undertake improvements requiring years in order

to realise them. This is why men of capital look coldly on agriculture as an investment of capital; why men of energy, with a sense of commercial freedom, seek town rather than country occupations. I am in favour of a lease, and I believe north countrymen as a rule are so. Still, we find many good agriculturists in the south of England opposed to leases as favouring an "up and down" system of farming, and as not being demanded by farmers; many farmers being, it is said, averse to taking a lease when offered to them. If you have not a lease you must have a longer notice. A six months' notice is too short, and a one, or even a two years' notice would be more in accordance with the length of time required to complete and realise farming operations.

TENANT-RIGHT.—Although you will find many experienced men opposed to long leases, you will find wonderful unanimity with regard to Tenant-Right, or the adjustment of claims between the landlord and the out-going tenant, whether in favour of the former or the latter. The principle of compensation is allowed on all hands, and we have only to glance at the customs of the various counties to see that a Tenant-Right is slowly making its way. Many counties, however, have no such customs, and in scarcely any is the system of compensation complete or consistent with scientific knowledge. What we want is a short Act of Parliament, legalising and compelling Tenant-Right, stating that when a tenant quits, he is entitled to receive a sum equivalent to the value of the capital he has sunk in improvements not yet realised by him, but which his successor, or the landlord will enjoy. The details of a Tenant-Right system need not detain us, but if the principle is acknowledged by Government, each district will be able to frame a code of rules for every contingency, and practical men will be found ready to act as valuers in adjusting the rival claims. Farmers are, however, too dead to their own interests to move in the matter. Can they not even get up a petition for a Tenant-Right Act, to show that they take some interest in the matter? Why should you not take the initiative in asking for the co-operation of Chambers of Agriculture throughout the country in forwarding so desirable an end?

WANT OF CAPITAL.—There is a sad deficiency of capital among the cultivators of the land in many parts of this and the adjoining counties. Perhaps I had better include the whole country. Capital is proverbially timid, and, this being the case, it is not to be wondered at that it should keep out of a business in which profits are not very large, and in which the restraints imposed by landlords are so stringent. Still, we find no lack of capital over large districts, and I believe we shall find it circulating freely in proportion as it is made secure to the capitalist. Want of capital is not only a tenant's, but also a landlord's weakness. Landlords are often spoken of as poor; their estates being burdened by liens of various kinds, and a policy of entails, settlements, and primogeniture, calculated to keep up the dignity rather than the money prosperity of the tenant-in-tail. The following anecdote has been related, in order to show the advantage of abundance of capital: A farmer, who was doing very badly both for himself and his landlord, was horrified by finding his rent raised and half of his land taken from him in one day. The story, however, proceeds that, in spite of the loss of land, the farmer became a prosperous man on the smaller occupation, thereby teaching all around him the advantage of plenty of capital per acre. Equally true would the same principle be with many landlords, who, were they to sell a portion of their estates and improve the remainder, would increase the value of their estates, and become benefactors to their country, instead of the opposite.

WANT OF SUFFICIENT EDUCATION.—Want of education is among the chief obstacles in the way of agricultural improvement. It is not in business knowledge that the want of good education is most evident among farmers. They are, as a rule, very shrewd in conducting their business; but, at the present day, when so much scientific knowledge is brought to bear upon agriculture, the farmer should be acquainted with the principles upon which his practices are founded. Agricultural literature is badly supported; and yet, I can only say that a single number of the *Agricultural Gazette*, *Mark-Lane Express*, or, in fact, any good agricultural paper, contains a mass of valuable information, which the money-making farmer cannot really afford to lose. Look also at the journals of the Royal Agricultural, the Bath and West of England, and the Highland Agricultural Societies. Their volumes are replete with calculations, estimates, results, opinions, and facts, written by

men whose names we all respect; and yet, from all I hear and observe, although these articles have been written with ability, they are passed over with indifference, and although embodying much labour, both in investigating and writing, they are not considered worth perusal. Then again, look at what a good agricultural library ought to contain at the present day. Books on the practice of agriculture; books on agricultural chemistry, botany, geology, entomology, and zoology; on live stock, buildings, and implements; on landlords and tenants; on agencies and law of the farm; on valuations; on foreign and colonial agriculture, &c., &c. I say that while, as at present, these works are dead, so far as farmers are concerned, there is every reason to wish for improvement. Still more disheartening is the want of education, when viewed from another aspect. It is the chief cause of the isolation which is so fatal to the agricultural community. Where is the farmer, I ask, who knows by name even the eminent men at present labouring in his own occupation? I do not believe they are known among farmers so well as they are among landlords, agents, and the public generally. In the same manner our progress in contiguous and remote counties is not watched with any interest. Struggles with unjust landlords, on account of game or politics, provoke but little remark, save in the newspapers, and their note is not re-echoed in farming circles; great movements, set a-going by our Farmers' Clubs and Agricultural Chambers, find but feeble response, even where they directly touch the farming pocket. Local-taxation, Tenant-Right, Malt-tax, regulations for preventing the spread of cattle diseases, all fall about equally flat, and fail to draw farmers together. This I have frequently noticed and deplored. Why, I have asked, do you not come to the Chamber of Agriculture meeting? The reply is generally that they do not see the use of it—that it can all be read in the newspapers. This, I need hardly say, is the height of folly, and points simply to the fact that education is wanted for the farmer. At this day agitation is everything. Game would not remain in the hands of the landlords a year if the farmers really felt about it as they appear to do, judging from the speeches of their leaders. Local taxation would be at once adjusted, were the county members confronted by an intelligent and earnest constituency. Tenant-Right and security of tenure could not be refused to an educated body of men with money in their pockets. Then, again, look at the advantage which a sufficient amount of education gives to a farmer in treating with his landlord or his agent. All these considerations point clearly to one conclusion, that were farmers educated, intelligent, alert, and more in harmony with the times they live in, all these other obstacles mentioned, or yet to mention, would speedily disappear.

GAME.—I do not think anything has really stirred farmers to the same extent as the game question. More crowded meetings, and more vociferous declamation has been held respecting it than any other topic of agricultural interest. The game grievance is often a heavy yoke upon the farmer's neck, and under existing relations it is always liable to be so, should the landlord become a game-preserve. The law takes it for granted (and here I speak under correction) that the game is the tenants unless it is especially reserved, and it is difficult to see what more could have been done to secure fair play. The tenant, however, first allows the reservation to be made, and afterwards bemoans the hardness of his lot, as the occupier of a game preserve. This, at first sight, seems unreasonable, but when we consider the whole case, we may come to a different conclusion. There is the element of competition for farms on the one side, and the monopoly of land upon the other. The result is, many applicants for one farm, and agreements are accordingly drawn up, which although apparently expressing the wishes of both parties may, and often are, really in favour of the landlord. This being granted, we are next told that such a state of things is natural, and that you cannot interfere in the matter of private contracts by means of legal enactments. It must, however, be evident that this assertion does not close the question; for if the tenants, as a body, are so injured by the over-preservation of game that their functions as food growers are interfered with, then the nation may properly interpose, and rule that the tenants should be freed from the liability of annoyance from Game-laws. This is a very grave question, and demands settlement. Could the requisite public spirit, or public opinion, be raised among farmers regarding the game question, I feel convinced that it would lead to a much more satisfactory solution of it than

any Act of Parliament can effect. It is, however, so difficult to obtain this expression of opinion that, if dealt with at all, it will probably be by law, and that at no remote period.

ENTAIL AND PRIMOGENITURE.—The first of these results in nominal ownership. The life-tenant not being an allodial or free owner, he is, therefore, unable to sell his land, and is fettered with regard to the privileges belonging to full proprietorship. Entail also encourages the accumulation of property in few hands, which needs no encouragement, but rather regulation. Primogeniture will probably be legally abjured shortly. Not that it is likely that a man will be obliged to divide his property, but rather that if he dies without a will the law will assume that he meant to make an equal division among all his children. At present the law assumes the father's wish to have been that the eldest son should have the land. This is a relic of feudal times, when, on the death of the Crown tenant, the fief reverted to the Crown, and was then usually conferred on the eldest son as successor to the last tenant. As the feudal system fell into disuse, the Crown ceased to exert any active power, and the estates were customarily handed down in the line of the eldest males. The effect of abrogating the law of primogeniture would be moral rather than legal. A father would be just as much empowered to leave the whole of his estates to his eldest son as ever; but, in doing so, he would have to execute a legal will, disinheriting his other sons. In other words, he would have to act more harshly to his youngest sons than the law would have done had he died without a will. The effect of primogeniture upon agriculture, must, on the whole, be prejudicial, because it is not likely that a father will be inclined to still further improve the already too large inheritance of his first born. He is more likely to try and save something as a settlement for his younger sons and daughters. The whole subject of our land laws requires reviewing, and the nearer we return to free allodial ownership the better, so that land may be purchased as easily and with as little cost as railway shares, and cease to be a singular property, the complications of which seem chiefly useful in maintaining lawyers.

THE CONDITION OF THE LABOURER.—This is, no doubt, a difficulty in the way of agricultural improvement. In the late Franco-Prussian war, education was found to exert a wonderful influence in making the German troops effective. I look upon this as a remarkable fact; for, if education is powerful in causing masses of men to act better, when under the thorough command so essential to success in the battlefield, and when discretionary power is certainly reduced to a minimum, how much more will it be effective in making men better shepherds and carters? I believe in education, but also in good wages and good cottages, as the very principal means of improving the condition of the labourer, as well as the cultivation of the ground. The actual condition of the agricultural labourer, although improving, calls loudly for amelioration. Were landlords and farmers as careful to provide proper sleeping and living accommodation for their farm servants as they are for their horses, we should soon see a wonderful improvement both in moral and physical development. The landlords, under present relations, are responsible to a much greater extent than the tenants for cottage accommodation. If farmers were more alive to the importance of a well-conditioned peasantry, they would put more pressure upon the landlords, or offer to do the work of building, provided they received a proper compensation upon quitting. This is an urgent matter, since it is every day directly affecting the well-being of millions of our fellow-countrymen; and since there is no prospect of either landlords or tenants setting to work generally to provide sufficient cottages for labourers, we shall probably have interference from head quarters.

POLITICAL AND SOCIAL RELATIONS WITH THE LANDLORD.—These are too feudal in their character. They assume inferiority on the part of the tenant, and benevolence on that of the landlord. Here, again, the isolated tenant must bend to circumstances, but the general body of tenant farmers should rise to a higher sense of their position in the country. It is difficult at present to see how a tenant can safely vote against his landlord in a general election; but I believe that coercion will cease so soon as farmers assert their right to independent action. You may perhaps ask what this political aspect of the tenants' relations has to do with agriculture? I can only reply that the more dependent the position of a tenant farmer is, the less eager will men of culture, of capital,

and of intelligence, be to enter farming as a business. It must be a grievous thing for a gentleman who wishes to farm rather than to enter the army, the church, or some other profession, to be confronted with the fact that, as a tenant, he will be liable to the depredations of game and game tenants, bound to certain political opinions, and oppressed with a sense of feudal inferiority.

THE LAW OF DISTRRAINT (HYPOTHEC).—This law, which gives the landlord a decided preference above other creditors, is blamed for injuring the credit of tenants among the tradesmen among whom they deal. It also is said to encourage a class of tenants without capital, who are only tolerated by the landlord because he knows that, however other creditors may be paid, he at least is safe to get twenty shillings in the pound. On the other side, it is held that the abolition of these laws would be ruinous to many farmers who are now struggling with adverse circumstances, and are yet, owing to the operation of the law, able to hold their farms. I have now laid before you some of the chief drawbacks to agricultural development. I have attempted to treat the subject in a truly liberal spirit, and to advocate a policy calculated to encourage the flow of capital into agriculture. My views may be thought too advanced for the present class of tenants, and I grant that there are large districts in which more freedom to tenants than they already possess is not desirable. I, however, hold that it is the place of those who speak on such subjects to advocate views rather in advance than behind the times in which they live, and to look upon the able and intelligent tenants of good agricultural districts as representing the farmers of the country, rather than poor and ignorant occupiers in benighted districts, who are yet years behind in their practice, and comparatively ignorant as to theory.

Major COCHRANE said they all admitted that the tenant had not security for the outlay of capital, and if that society had to be useful, they would exert themselves to make such changes as were called for. It would be a benefit to the landlord as well as to the tenant. It was not to be supposed that men would risk their capital until they had better security. He thought the questions affecting the farmers might be divided under three heads; that they should have a proper knowledge how to invest capital; that proper security should be afforded to tenant farmers—leases had been named, but he was not an advocate for them; and the question of game. This latter question, he thought, should be a matter of arrangement between landlord and tenant. With reference to the law of primogeniture, he thought it had better be left alone. They would prefer being under large landed proprietors than small ones.

The Rev. H. C. LIFSCOMB demurred as to the want of education amongst the farmers and labourers of this district.

Mr. WATSON said it was the result of persons introducing complications into their business that they had to call in legal aid to get out of their difficulty.

Mr. GRAHAM said compensation to tenants would be very valuable if it could be brought into working order; but he was afraid it would operate so that the good tenants would get nothing, and the bad tenants a great deal. Education was not so low as represented, and all agricultural periodicals were well supported by the farmers. With reference to the game question, without entering into it, he might remark that the game eat a deal more food than it supplied.

Mr. MIDDLETON supported Mr. Wrightson's views.

Mr. D. NEESHAM urged the necessity of security, which would be beneficial to both tenants and landlords.

Mr. HAWDON said if compensation were given for drainage, hedging, and road-making, he did not know that they would have much to complain of, especially if notice to quit were extended to one or two years. They, as a rule, had no objection to their landlords killing game; but they had an objection to their letting it to hucksters and gentlemen, who killed the game and sold it to dealers, taking what had been fed on their lands for their own profit.

Mr. ABBES supported Professor Wrightson, as did Mr. Broady.

Mr. BELL objected to leases, and thought landlords and tenants ought to be sufficient to make a bargain.

Mr. W. F. SCARTH thought there was great need of education amongst farmers as pointed out by Mr. Wrightson. He thought that the question of security would be best dealt with by simple agreement at the present time.

THE HEXHAM FARMERS' CLUB.

THE LAND QUESTION.

At another adjourned meeting for the purpose of resuming the discussion on a paper read by Mr. Thos. Bell, of Hedley Hall, on the relative interests of landlord, tenant, and people in the soil, Captain Nicholson, in the absence of the president, Mr. C. G. Grey, presided.

Mr. MARSHALL, in opening the discussion, said that although he agreed with the principle of Mr. Bell's paper, he did not think that it could be carried out practically. He believed that something in the form of a lease and Tenant-Right could be much more easily managed. He knew that there were many objections made to this, and perhaps if these were more fully stated they would be more patent. So far as he could see he could not go the whole length Mr. Bell went in his paper, though he considered that the principle was right that the tenant should have some compensation for unexhausted improvements. They must not forget that the improvements a tenant made were very seldom permanent improvements; they might be so-called permanent improvements, but they must be followed up by good farming to make them permanent. Mr. Bell endorsed Mr. Gladstone's opinion that whatever increased the lettable value of the land was worthy of compensation. To some extent that might be true, but the landlord must have some say in that matter, and if he did not desire to have his land improved the tenants ought not to have compensation for it. He thought they could hardly follow out this principle to an extremity without reducing it to an absurdity. He reiterated that he agreed with the principle of compensation for improvements, but he could hardly follow it out to the extent it seemed to have been followed out in the paper.

Mr. THOS. DRYDEN remarked that the subject was such a wide and far-reaching one that he scarcely felt competent to grapple with it sufficiently, and it was hardly possible for anyone without deep thought to probe its bottom. In seconding the motion for the adjournment, it was not with the wish of having an opportunity of speaking upon the subject, but to give Mr. Bell an opportunity of replying to any arguments that might have been adduced in opposition to his paper. The question was as to the relative interests of landlord, tenants, and people in the soil. Taking the people's interest first, he held that the people had a right to have the soil properly cultivated, a matter which he thought was admitted on all hands. The landlord, as owner of the soil, had many duties to perform, more than perhaps any man could perform as he would wish to do. It was a wrong idea, and one which was often used, to suppose that a landlord had the right to use his land for pleasure and sport and not for the good of the community at large. It was a weak point to say that owners would not live on their estates but would spend their time elsewhere unless their pleasure and sport were provided for, but he was sorry if landlords used that argument for the preservation of any of their privileges. He would like to see the landlord have a large opinion of his duties and seek to perform them accordingly; to see that the land was properly farmed and produced all that it could, not only for his own interest, but for the interest of those beneath him. He would then keep the confidence of the country, and the respect would be paid to him that he would like to see paid to him. This was a question which would be more looked into in these days of education, when everything would be sifted to the bottom, and if found wanting objections would be taken to it. Then as to the game question, referred to by their president at a previous meeting, who said he would make game property, but they were here to-day and gone to-morrow, and to make them property would savour of communism, and he could not see the justice of that at all. It was probable that there would soon be an alteration in the Game-laws, but it was his opinion that if the landlords would agree to the abolition of ground game it would put the question at rest for a considerable time. If landlords would only agree to that, it would shelve the question for a time if not altogether. He liked moderate views, and when things

were carried out with moderation it was best for all parties. In order to have as much food produced as possible there ought to be a lease and also compensation, for land would never be properly kept up to a high state of cultivation; in fact, it would be unwise for a man to farm heavily without proper security. A lease without Tenant-Right naturally resulted in an "up and down" system of farming, unless the farm was re-taken some few years before the lease ran out. A lease combined with compensation he regarded as the only means for securing the proper cultivation of the soil, so as to produce the most food for the community. They must not look upon this matter as simply a landlord and tenant business—they must take a more enlarged view of it as food producers for the community at large. As to the labourers, they should see that they had good cottages so that they might live in comfort, and as to the transfer of land he thought it might be simplified a great deal. On the general question of Tenant-Right and compensation, he believed that it would lead to improved cultivation, to increased production on every land, and to greater contentment of the community, when they saw that everything was done that could be done or ought to be done, and it would be the means of preventing anything of a revolutionary character. If, on the other hand, the community saw that the soil was not used to the best advantage, and was used for other purposes, it might lead them to desire a state of things which they might now consider visionary and even foolish. Objections had been taken during the discussion to their entertaining these theories on the land question. In Parliament many things were talked which might not seem very practical, but something practical was brought out of them. These theories were the germs of thought, the thinkings of men, and might result in something practical, and ought not to be speedily condemned as they were by some. Any innovation, whether in politics or mechanics, that had gone forth, had at first sight been laughed at, but in the end something had been produced for the good of mankind. He thought they ought to weigh matters carefully. There seemed to be some difficulty as to what was proper compensation to a tenant for his interest in the soil, and perhaps there might be some difficulty in getting a scheme that would fairly meet the claims of all parties. However, if they approved of the principle, he had no fear but that a proper scheme would be worked out. He should like to propose some resolution, so as to draw forth the opinion of the Club on the matter. His resolution would be to the effect that this club, recognizing the right of the people to have the soil properly cultivated, is of opinion that in order to effect this a lease and Tenant-Right for the farmer seemed indispensable. He thought that this would benefit all classes; for, if the people of the community were contented and prosperous, then, of course, all classes must of necessity be so. The president thought that the importing of food did not impoverish the country. It was true they could bear the strain; but if they grew the food without importing it they would be more wealthy. Being so rich in manufactures and commerce, they were able to bear that strain, but it would be wise to farm as well as possible, and to produce as much good as possible, for things might change, and it was right in principle that a country should produce in its own soil all that it possibly could. They heard a great deal about the increase in the value of land, and in return for this increase, obtained without any industry on the part of the owners, land ought to bear the heaviest portion of the taxation. As he had already said, land increased in value without any industrial efforts on the part of its owners, and the industrial classes, whose labours increased the value of the soil, ought not to bear that taxation, but the landowners. It was very unfair, if there was a change in the taxation during the tenancy of a farm on a lease, that the tenant should be called upon to pay the additional taxation. His opinion was that the taxation should fall upon the owner, and not upon the tenant. He could not but see that land should bear the

greatest share of taxation, and also local rates; trade might fail, it was not real, but the land was always there.

Mr. J. W. WILKINSON thought that they would all agree that Mr. Bell had laid before them a paper which had attracted a great deal of attention and opened up a wide field for discussion, and all the more so as it aimed at creating such a tenure of the soil as would attract to it that capital which would fully develop its resources. But what changes were necessary? Had they to have a system of Tenant-Right, and what kind of Tenant-Right ought it to be? The Irish system of Tenant-Right had been referred to, and some were in favour of having such a Tenant-Right in this country, but he thought the Irish system of tenure was different to theirs. At any rate, the Tenant-Right had not made the Irish tenantry more loyal, if it had made them more prosperous. In Ireland, there were many instances of farms being in a miserable state of decay, and the landlord seeing no chance of any increase in rent had no interest in laying money out upon it. If they had a stern law to take the property out of the hands of the landlords, he did not think they would be placed in a much better position, although he could not but agree with the remarks that had been made as to the present tenure not being of such a kind as to attract capital to it. If proper security was given for capital invested in the soil, farms would be better cultivated and there would be a larger production of animal food. These ideas had got abroad among the lower classes, and it would require something to be done, or the matter might be taken in hand in a mere radical manner. Suppose a tenant increased the value of his farm £100 a year, what portion of such increase would be the tenant's and what portion of it the landlord's? Another system of Tenant-Right was that the tenant should be paid for unexhausted manures, cakes, &c., at the end of the lease. Which system was the best, that in which they received payment for manures, &c., or that in which they received the capitalised value of the farm? Giving payment for manures, cakes, &c., at the end of the lease, might tend to the improvement of the farm, but in a general system of good farming from the beginning to the end of the lease the small amount that the tenant would receive for manures, cakes, &c., it would scarcely pay him. He wished to remind them, however, that in discussing this subject, they should endeavour as much as possible to keep up the good relations that existed between landlord and tenant. They were apt to condemn communistic views in others, but in dealing with the land question they should not carry them out themselves. They should approach this question in a way that might lead to some satisfactory settlement by mutual arrangement rather than by Act of Parliament. He had no doubt but that the whole of the game and land laws would come before Parliament in a bundle together, but they could not deny the rights of the owner of the soil to a certain extent, and if he chose he might farm game or anything else. What they wished for was the tenant to have some guarantee that he would reap the reward at the hands of his industry, and to make the tenure of land such as would attract capital into the soil and bring it into a higher state of cultivation. He thought it was to the interest of the landlord to have his farm left in a proper state of cultivation. If the Club formed any resolution calling for a more satisfactory settlement of the land question, he would be in favour of recommending it to the notice of the landlords, but he was not in favour of Parliamentary interference, which he considered would not be altogether satisfactory to either of the parties. He believed that the difficulty in the land question was the over-preservation of game; in many instances men had no heart to farm well, when so much of their produce was eaten by game. He thought that they should point out to the landowners that over-preservation was not protective of the tenant's or anyone else's prosperity, and the result would be much better if they would give the tenant a proper guarantee, so that he might cultivate the land as it ought to be. A lease was considered the most satisfactory tenure of land, and at the end of it there ought to be some kind of compensation, mutually arranged between landlord and tenant, and without Parliamentary interference. One of the results of the Irish Land Act had been to drive some of the best landlords out of that country, although the tenants petitioned that they had nothing to complain of. He would like to see the Club form its opinions on the subject, and lay them before the landlords of the country, which could be done in a proper way.

The CHAIRMAN said that Mr. Marshall very properly asked,

"What is improvement?" and if that was answered it would clear the question for discussion. This was perhaps a more difficult question than it appeared at first sight; a man might suppose that he improved the land very much because he ploughed it. They ought to remember that land produced its crop each year at the expense of itself, and every crop taken off took out of the soil so much of that which positively constituted it, and which constituted the elements on which its value depended. According to Liebig, if they took a square yard of land—a foot deep, for that was something like the depth land was supposed to go as far as its important constituents were concerned, and they had in that square yard of land a certain quantity of elements positively necessary for every crop grown—the first year's crop would go with so much, the second year's with so much more, and so on, till, if they waited long enough, nothing would be left; and the farmer who merely ploughed the land and did not put anything back necessarily impoverished it instead of improving it. They should first settle the question "What was positively an improvement?" Mr. Bell's paper was on the relative interests of landlord, tenant, and people in the soil, and as he looked at it the interests had to be considered correlatively, and it was not to be made a question between landlord and tenant. The people had a right to expect the proper cultivation of the soil, but the agriculturist had also a right to expect something from the people. At the present moment all consideration was given to the sanitary arrangements of towns; there was no consideration for the waste of the material on which the land was entirely dependent for its good condition and improvement. The only thought of the people was how to get cheaply fed and comfortably placed without any reference to the condition of the land hereafter.

Mr. BELL, in replying to the discussion upon his paper, said he was very much obliged to them for the kind and temperate way in which they had discussed the paper, especially as it was full of subjects on which men held the most widely different opinions, yet there had been a disposition shown to discuss them fairly, and to find out, if possible, where the truth lay. He asked them to extend to him that indulgence and forbearance they had shown to him at their past meetings, as he felt much in need of it in having to reply to what had gone before. In the first day's discussion no serious objection was raised to the principle of the paper. Mr. Joseph Lee professed to differ with his views on the tenant's interest, but he thought that what he said went materially to confirm his argument that some mutual security was requisite for both landlord and tenant for the interest they had individually held in the soil. Mr. Christopher Gray went off on another tack; it might perhaps soothe that gentleman's disappointment in regard to his paper by his stating that he thought the relations of the labourer to the tenant scarcely came within the scope of his paper, and should be treated as a separate subject. Mr. John Hope's remarks came from the people's point of view, dealing with the subject in its broadest bearing, and he thought, as such, deserved consideration. In dealing with the president's remarks, he must confess to some difficulty, as it seemed to him that several of them were made under some misapprehension of what he (Mr. Bell) had stated. Mr. Grey, in commencing his speech, made him to say that the country which imported its food must necessarily be impoverished, but the most important part of the sentence was omitted, namely, if able to produce it. No one could deny that our country could materially increase its productions, and when they recollected and sufficiently realised the fact that an increase of only one-tenth would add twenty millions to their annual income as a country, he thought that the agricultural interest would not be so coolly ignored by the country. He would almost have preferred not to have had to make an allusion to the game question. However, he must confess he had not seen that it had been shown that it was not a people's question. Granting—according to the President's views—that game ought to be made property, who was to make it so? Landlords and tenants could not make it so, if they were ever so wishful, for it was only the people through Parliament who could make it property. Then, if it was made property, there would be a difficulty in the fencing of such a large stock and in the liability of tenants and landlords for the damages caused to their neighbours' produce. The laws of primogeniture and entail might have their advantages, but it seemed to him that there was a difference in the way of treating land from other sorts of property, in continuing this system of

tying up land, which, as a result, prevented the land from being available in assets to creditors. It also perpetuated a system of life interest which effectually prevented any improvements being effected in the land at the expense of such landowners. That part of the paper which referred to the tenant's interests seemed to have called forth the greatest differences of opinion. Before entering upon the subject they would perhaps allow him to disclaim the most remote connection of anything which savoured of division of property, or, in short, any breaches of the tenth commandment. He should feel very sorry indeed if anything that he had said should cast the faintest breath of aspersion on their landlords; he considered them, as a class, a body of men of whose honour, ability, and generosity they might justly feel proud. Farmers were generally looked upon as grumblers; that was part of their vested rights, that he thought no one was disposed to dispossess them of. They were told to state their grievances plainly and cease grumbling. What they complained of in this respect was that tenants were able and wishful to improve their farms, in many cases double their present produce, which many of them could do very well, but they had no security or guarantee that such improvements should not immediately or six months after pass into the hands of the landlords without any compensation given to tenants for such improvements. The remedy they proposed was this, if farmers did improve their holdings, that they should receive compensation—legal compensation, a legal guarantee should be given to them that they should receive a fair portion of the value of such improvements on quitting their occupancy. He must say that in asking for this he did not see that farmers were asking for anything that belonged to any other person—they were simply asking for what they had created themselves. Let them look after the future of farming. Suppose that in the next twenty-one years the farmers of Great Britain should increase the value of their holdings to the amount of several millions sterling—this they could do, and he believed would do, if such compensation was given to them. But where did this capital exist at the present time that the farmers were going to put into the soil to create this improvement? Clearly not a fraction belonged to the landlord at the present time if the tenants were going to create this proportion themselves. If the tenants shifted their capital out of one place—the place in which it was at present—and put it into the soil to make permanent improvements, all they asked for was simply that it should not be confiscated to the landlord. The great objection to legal security being given to the tenant, so far as he could see, was that landlords and tenants must make their own bargains, and no interference would be allowed. The question arose, “What will they bargain for—what has the landlord to dispose of?” Clearly, the farm in its present condition. They did not want to make the least interference with that, and the landlord had a perfect liberty to farm it, or let it, or to propose such conditions as he chose; but the landlord also claimed the power to confiscate the capital that the tenant might have put in the soil during his occupancy. The Government at present gave them that power; Government did not acknowledge that the tenantry of Great Britain had more, or could have more, than six months' interest in the soil. If they expected more, they must give security of tenure, but if they declined to give such security he would be glad to hear on what mercantile principles they expected the tenantry to increase their interest in the soil so as to materially increase the products of the land for the nation. The president said the tolls and many other things were farmed out on the same principle of a simple bargain, but “toll farmers” were not expected to improve old roads or to make new ones; they invested no capital, and, therefore, there was no parallel. The question in the paper which their President noticed, was “If a man got back his farm better than before whose was the increase?” Mr. Grey answered by asking another, “If a landlord lets a farm at £300 a-year and gets it back worth only £250 a-year whose is the loss?” He did not think that was a fair answer to the question. If one class of tenants wronged their landlords by wasting their farms he did not think that in the least justified the landlord in spoiling another class of tenants who had improved their farms, but the owners, in his opinion, had a sufficient guarantee against any serious deterioration in value in having the power of eviction at six months' notice. This brought him to the difficulty of combining a Tenant-Right with a lease, which he thought would

be unfair to the landlord; because if a landlord agreed to compensate a tenant for his improvement it was not fair to grant a lease, unless the tenant agreed to guarantee him against any deterioration. He considered that a landlord, holding the power of eviction at six months' notice, had a sufficient guarantee that his estate would not be very seriously interfered with; it gave him perfect liberty and choice of tenants, and freedom to do with his estate entirely as he chose. The only thing necessary to be done was to have mutual payment of compensation of all kinds between them, and when that was done they would be put upon an equal footing. He would not wish to interfere in the least with landlords granting leases to persons in whom they had every confidence, but he did not consider that strangers had any ground for asking for a lease under the circumstances. The creation of middlemen, which Mr. Grey spoke of, was not a necessary adjunct to Tenant-Right. He did not think the out-going tenant should have to recognize his successor in any way for Tenant-Right; the whole business lay between the owner and the tenant, and, therefore, middlemen were out of the question. They had heard a good deal about farmers deteriorating their farms, but during the past few years had not the agricultural produce of Great Britain been very largely increased? He was not able to show how much of this increase was due to the landlords and how much was due to the tenantry, but he spoke confidently when he asserted that a good deal of the capital that had effected this improvement had passed out of the hands of the tenantry. The interest on such capital might have ranged from positive loss to the tenantry to over 100 per cent. gain, but that did not affect the argument as to the capital passing out of the tenants' hands. He would appeal to them as to what was the general experience or general practice in regard to letting farms under a lease. The farms at the end of a lease were generally re-valued, and if the farm would bear a rise the tenant had to take it at such valuation, very little account being taken generally of who caused that increased value. There might be exceptions to this, but he believed such was the general practice. He remembered feeling very keenly on this subject himself when in treaty for a farm. An agent offered to a farmer a year-to-year tenancy, the tenant asked for a lease, when the agent told him he would just be as well off with a tenancy from year to year as with a short lease, for the chances were when the lease was out the farm would have to be re-valued and the tenant would have to pay a higher rent. This agent was holding a high position, and he believed he simply stated the truth, to which many experienced farmers would bear feeling testimony. He knew well that there would be difficulties in the way of carrying out the principle he proposed, but once grant the truth of the principle, and he was perfectly sure there would be some way of carrying it out—the difficulties were not insurmountable. Whatever mode of compensation was proposed they would require some local court of arbitration to settle differences of valuation. It appeared to him to be much more pleasant to pay for tangible results than for a primary cause which might have doubtful results and might have sprung from doubtful causes. What he was most anxious for was to have the principle of compensation acknowledged, and not to go into details. The value of the improvements might be allotted at the rate of one-third to the tenant and two-thirds to the landlord, or *vice versa*, or in whatever ratio in which it was thought justice was done to both parties. No local court of arbitration could go further wrong than the present state of affairs which allowed one party to sweep the table of everything. Something was said about the enclosure of commons, and that the surrounding owners were only owners of such commons. It always appeared to him that the rights of the public and the rights of the owners were in an extremely undefined state as to the division of commons. Wysesley Common, situate in the neighbourhood of London, comprising about 365 acres, in 1869 was proposed to be divided, and the Enclosure Commissioners went to Parliament with a bill to divide this common amongst the surrounding owners, and this was looked upon as the legal way of going to work. The bill was framed on this principle; went through the House of Commons into the Committee-room, and witnesses came before the committee stating that they thought the public should be considered in the matter, and instead of confirming the claims of the owners and Enclosure Commissioners, ten acres out of the 365 were set apart to the public. It appeared to him that

the owners claims and the claims of the public had never been clearly defined. Coming to that day's discussion, Mr. Marshall acknowledged the correctness of the principle, yet he seemed to say that there were practical difficulties in the way of carrying it out which prevented it being adopted. He had never heard yet of anything being thoroughly right in principle, but that there was some way of putting it in practice. If the principle was right there must be some way of carrying it into effect, or else the principle was wrong. Mr. Wilkinson talked of taking the property out of the hands of the landlords altogether. He showed as clearly as he could that it was no intention of his to interfere with property as it at present existed, and they could not say that what he proposed would in the least interfere with vested rights. As to the security of tenure in Ireland, it had come out in a marked way lately. It was said when the Irish Land Bill was passing through the House of Commons that property would depreciate in value. In the sale of the Waterford estate lately, instead of property going from 18 to 20 years' purchase as formerly, it had gone from 30 to 50 years' purchase, showing that the security of tenure did not affect the interest of the tenant alone, but also materially affected the interests of landlord and people.

Mr. DRYDEN proposed the following resolution: "That the Club, recognising the right of the people to good cultivation, is of opinion that if security was given to the capital of tenants it would promote the interests of landowners, tenants, and consumers, and that nothing would tend more to the advancement of agriculture than some legislative enactments, giving compensation for unexhausted improvements, and facilities to landlords for obtaining damages for depreciation of property."

Mr. LEE seconded the resolution.

Mr. T. P. DODS said that, not having been present at the previous meetings at which this question had been discussed, and having only come in to hear Mr. Bell's reply, he did not intend to take any part in the discussion, but, as a member of the Club, he rose to express his dissent from the resolution proposed by Mr. Dryden. He held that the public, if they had an interest, it was so remote that it was not an interest in the cultivation of the soil that they could recognise in the terms of the resolution. If they were living under protection, he could see some sense in it, but not as they were. He dissented from the resolution. He was not in favour of having legislative enactments passed, giving compensation to tenants for improvement in the land, because they had already

an Act of Parliament by which whatever buildings were erected by the tenant, with the consent of the landlord, he could either remove or claim payment for at the end of his holding. He could not see that any tenant should be compensated for making improvements at his own discretion on the farm, and without the leave of his landlord. He might go and build a village on his landlord's property, and claim payment for it.

Mr. BELL: That would not come under an agricultural improvement.

Mr. DODS said he did not rise to enter into any discussion, but simply to express his dissent from the resolution.

Mr. BELL remarked that there seemed to be some difficulty in arriving at the knowledge of what was permanent improvement, or what could be called permanent improvement. As he had already stated, Mr. Gladstone, in the House of Commons, when the Irish Land Bill was under discussion, gave one of the best definitions of it when he said it was "whatever increased the lettable value of the holdings." Mr. Dods made an observation about a village being built upon a farm, but that would not increase its lettable value. The tenant, however, was justified in getting the increase if it really did benefit the holding.

The CHAIRMAN remarked that there was such a thing as tenant, who wanted a residence, building a larger house than the place was worth. Again, a man with no capital might build a large place.

Mr. BELL: There is a remedy in leaving the matter to a court of arbitration—if there was any disagreement as to the value of the improvements, if left to the local court of arbitration—to define really the improved value of the holding created by the tenant. If the landlord could show that there was any other thing that had created part of the increased value, that must be deducted from such increased value, but if the tenant showed that he had increased the value, and the landlord was unable to disprove it, then it would remain that the improvement had been created by the tenant. If the valuation was raised, notwithstanding that ploughing and those things were only a means to an end, and the land did take in a certain proportion of ingredients from year to year above that which was taken away, and if there remained when he left as much as when he entered upon the tenancy, and so much more, so as to increase the value of it materially, then it was this increase alone which they were asking for.

Mr. DODS: It would be a fine lot of work for the lawyers.

The resolution was then put to the meeting and carried.

THE FRAMLINGHAM FARMERS' CLUB.

THE DOUBLE-FURROW PLOUGH.

At the first meeting, Mr. Corrance, M.P., in the chair, Mr. J. E. RANSOME introduced the subject of double-furrow ploughing in the following paper:—

I propose this evening chiefly to confine my attention to the consideration of the questions: First, What are the advantages of double-furrow ploughs? Second, Can they be profitably employed on the majority of our farms? For there is no doubt that these are the points which directly interest the farmers of this country. In the first place, however, I think it will be interesting to inquire briefly into the history of double ploughs, to see how long ago they were invented, and how far they have been used prior to their revival in this country a few years ago. The first account of a double plough that I can find is in an old agricultural work (kindly lent me by Mr. Harland, Brompton, near Scarborough), entitled "England's Improvement," by Captain Walter Blith, who wrote in the time of Cromwell. A drawing of this plough is given, and also directions for its construction. In form it is like two ordinary ploughs, with the beams strongly secured together, the handles of the front plough being cut off as well as the fore part of the beam of the hind plough. In his description he says the plough may be set to a working gauge, by means of a foot or wheel placed in the foremost beam, and that upon ordinary arable land, and also upon fair clean lay turf, a double proportion may be ploughed with it, and con-

cludes by adding, "I for the present see not, but it may be of excellent use and expedition upon many lands in England." This plough must have been made more than 200 years ago. In another work, "Arthur Young's Tour to the North," published 1771, a drawing is given of a double plough fitted with two wheels, then in use in the county of Worcestershire. The following is his account of it: "But a new invention is coming in very fast, which is the use of double ploughs, which, with only the addition of the horse, do double the work by turning two furrows at once. It is no gimcrackery business, but so solid and strong a machine that the common farmers approve it, and accordingly some hundreds of them are made." The plough was afterwards improved by Mr. Berney, of Bracon Ash, Norfolk, who attached to it the Norfolk wheel gallops, and, when worked against the Norfolk wheeled ploughs, it did with two horses three acres in the time they did two. See "Farmer's Tour through the East of England, vol. ii. p. 121." Towards the close of the last century, and beginning of this, improvements were made in the double ploughs. Lord Somerville appears to have devoted great attention and energy to this subject, so much so, that by many he has been considered the original inventor; but, although this is not the case, he, undoubtedly, greatly improved the plough, and did much towards its introduction. His plough, patented in 1802, had but one beam curved in the middle to adapt it to take

the two ploughs. The mouldboards were made in two parts, and the tail end could be set out more or less to suit different sorts of work. A Leicestershire plough-wright, Mr. Mandford, of Iltham, made the first adjustable double-plough about the same period. The beams in this could be set wider or narrower, by means of screw stays, to plough different widths. Mr. Billingsley, of Slephton Mallet, used one of these Leicester ploughs worked by oxen, and it is recorded that six oxen ploughed 355 acres with it, in addition to other work, within eleven months, and that they generally turned two-and-a-half acres in eight hours. He says: "Some may doubt the possibility of making the double-plough so generally useful, but I can truly say I never yet found an instance where it could not be worked to advantage." To show what was actually accomplished at that early date with double-ploughs, I have extracted the following from an article on double-ploughs given in Rees's Encyclopædia. It is there stated that at a trial which took place on the Royal Farm at Windsor, 17½ acres of unstirred land were ploughed with four Devon oxen, one man and a boy in six days and a few hours, and that the oxen were in better condition after the trial than at the beginning. This is close upon three acres a-day, which you will allow was not bad work. In the same article mention is also made of a Mr. Tweed, of Sandon, Essex, who used the Someville double plough, and who gives the following account of the work in a letter to his lordship, dated Sandon, 1802: "I take the liberty of stating the experiments I have made with your two-furrow plough on strong land. I put my first plough to work with three horses and one man, against two of my own and four horses, held by two remarkably good ploughmen, who are very much averse to any new implements. After exerting themselves to the utmost every day for a month upon clover lays, bean and peaches, for wheat, they allowed, very much against their inclinations, that it performed the work best, which is entirely owing to the superior form of the breast, and the great advantage derived from the moveable plates. This trial having perfectly convinced me that there is an absolute saving of five shillings a-day every day they are used, I ordered a second, and soon after a third, and have ever since had all my work done with them, which before employed six ploughs, twelve horses, and six men, causing a reduction of one-fourth the horses and one-third of the men, and it is in my opinion one of the greatest improvements that ever was made in agriculture, for which I conceive the public and myself highly indebted to your lordship." It will thus be seen that double ploughs, even at a very early date, were found to be thoroughly serviceable and economical implements. Various trials of double ploughs were conducted by the Bath and West of England Agricultural Society at the beginning of this century, and so thoroughly did they then consider it a standard implement, that it was engraved at the head of their printed forms, used when giving diplomas in connection with the Society. We have in our possession one of these diplomas, given to Mr. Robert Ransome, my grandfather, in the year 1807, as an acknowledgment of the superior excellence of his new patent chilled cast-iron plough-shares. Since that time various improvements in the different parts of the plough have been introduced. Our own firm, upwards of 60 years ago, brought out a double plough, with wood beams, some of which have been in use to the present day. We have an entry in one of our old day-books of one supplied to the late Sir Wm. Middleton, of Shrlnobland Hall, dated February 12, 1818, "One new double plough. Repairing one old do." And they were worked on this estate for 40 years by two oxen to each plough, and doing their 1½ acres a-day. Subsequently this same plough was made entirely of iron. Later forms of double ploughs, in both iron and wood, have been made by ourselves and other manufacturers, and many thousands have been sold for use in this country and other parts of the world, though probably the greater number have been sent abroad. Now is it then, as it is clearly seen from the foregoing remarks that double ploughs have been made in considerable numbers, and have done their work satisfactorily and well, that they have not come into much more general use in this country? The reasons are several: 1st. Because there was not the same urgent necessity for their use that there is now, and it was not sufficient to overcome the prejudice in favour of the established usage. As an example of this we may take the now almost universal "wheel" plough, which had a hard

fight and a long one before it established its superiority over the old swing plough; and again, thrashing and reaping machines were some time in replacing the flail and the sickle. There is no doubt that the difficulty of obtaining skilled labour had a great influence in bringing about all these changes, and the daily increasing scarcity of labour has been a most powerful stimulus during the past few years to the introduction of the double plough. 2nd. Increased competition between this country and others in the produce of the soil makes it as necessary for the farmer as for the manufacturer to avail himself of any machine or implement which will lessen the cost of production. 3rd. The old form of double ploughs was not so convenient and easy for the ploughman to manage as those lately introduced. 4th. The old double ploughs did not draw so light as the new ones, especially on mixed and heavy soils, so that they were often too much work for three horses; consequently their use was confined almost entirely to light soils. When, however, the "Pirie" plough made its appearance in 1868, the time had come when farmers were well prepared to adopt any new implement that would help them in their labour department; and this, together with the fact that a considerable saving in draught was effected on many soils by the new implement, by the application of the friction wheel and also the greater ease with which the plough could be turned at the headland, are the principal reasons, in my opinion, why the double plough has revived at the present time and acquired such a deserved and well-merited popularity. To come now to the double-furrow plough of the present day, with all the improvements that have lately been made in it. To Mr. Thomas Pirie, Kinnundy, N.B., belongs the credit of bringing out the double plough in an entirely new form, and especially of fitting to it a friction wheel to run behind the plough in the angle of the furrow in place of the slide, in order to reduce the draught. For his invention he obtained a patent in July, 1867, but the plough was first brought to notice in this country at the Leicester meeting of the Royal Agricultural Society of England, 1868. From one cause or the other it did not figure very well at that meeting. It was not tried on the dynamometer, but one of his single ploughs, constructed on the same principle, was tried against the general purpose ploughs, and came out very heavy in draught. It had, however, been doing very well in Scotland, and Messrs. Fowler, of Leeds, took up its manufacture, and soon introduced a considerable number, having made several improvements in it, principally in the detail of its construction. The general form of the Pirie plough is so well known that I need not give you a detailed description; suffice it to say that it consists of two plough bodies carried on a wrought-iron frame work: this frame work is entirely supported on wheels, two of which run at an acute angle in the furrows, one in front, the other behind, and a third wheel runs a good distance on to the land, about midway between the other two, so that the plough is supported on three points at the corners of a triangle. The leading furrow wheel is steered by a handle leading to the back part of the plough, and handles are entirely dispensed with, but it is turned round at the headlands by depressing the land wheel and steering the leading furrow wheel. I shall not attempt to describe the various patterns of double-furrow ploughs made by the English and Scotch makers—our own firm, Howard, Horsby, Ball, Perkins, Pirie, Gray, Murray, Jack, Mitchell, and others, who have all been paying the greatest attention to the production of the best form of double ploughs. Some—and especially the Scotch makers—have more closely followed the general outlines of the Pirie plough; whilst most of the English makers—Messrs. Fowler excepted—have retained the handles and general form of the English double plough; but one and all have adopted the friction wheel for lightening the draught. The following are some of the chief points which should characterise a good double plough: 1st. It should not be heavier than is necessary for the land it is intended to work upon. 2nd. It should be strong and simple in construction. 3rd. It should have good clearance between the two plough bodies, to allow the second furrow to pass freely. 4th. It should have sufficient height under the beams to prevent any accumulation of rubbish. 5th. It should be so arranged that the width of the furrows can be easily altered. 6th. It should have a friction wheel to run at an angle in the furrow, to take the weight of the hind part of the plough, and the friction against the land side and sole caused by turning the furrow slice. This friction wheel should

be adjustable in depth and width to adapt the plough to a hard or soft bottom, and a slide should be interchangeable with it for special places—such as stony ground. 7th. It should be arranged to lift out of work, and turn easily at the headland without cutting up the ground. 8th. It should have a pair of handles of sufficient length for the ploughman to guide it, and assist it round at the headland. 9th. It may be furnished with a steering lever if desired, but when the plough is furnished with sufficiently long handles I do not consider it necessary, and it adds to the weight and complication. 10th. It should be fitted with the best breasts, shares, coulters, and skin coulters, to enable it to do its work efficiently and without waste of power. These points we have endeavoured to carry out in our double plough, but I especially wish to draw your attention to the principle, invented by my partner Mr. Jefferies, which we have adopted for lifting and turning them at the headland. Instead of depressing and locking the leading wheels, we lift the plough bodily off the ground in the centre of its length. This principle is carried out by us by adding an extra wheel on the off-side of the plough, and this wheel (which is simply carried idle when the plough is in work) is, together with the land wheel, brought down to the ground on reaching the headland. The ploughman pulls a lever connected with these two wheels, which, with the onward motion of the horses, lifts the plough bodily on to these two wheels three inches above the ground. On these two wheels it rides round as easily as on a cart, and, being made wide apart, the plough cannot be upset. We now come to the question of draught. Is a double-furrow plough lighter in draught, in proportion to the work it has to do, than a single plough? Or, in other words, can the same work be done with less power? This is, after all, the great point in connection with this subject; and without troubling you with all the figures and experiments which have led to my conclusions, I will endeavour to make clear to you the results at which, in my own mind, I have arrived. From the various dynamometrical experiments which I have made at various times on very different soils, and in various conditions as to moisture and draught, together with the reports of other draught trials, both public and private, I have come to the following conclusions: The comparisons are between ploughs exactly alike so far as their breasts, shares, and coulters are concerned, and taken at the same depth and width of furrow in each case. 1st. The old form of double-furrow ploughs, which had two slides, one on each plough body, took twice the power of a single plough fitted with slide. 2nd. A double plough of which the back part of the front body is cut away, and which has only one slide on the hind plough, does not take more than $1\frac{1}{2}$ times the draught of a single plough fitted with a slide. 3rd. A double plough of the new sort, with a friction wheel behind instead of a slide, does not take more than $1\frac{1}{2}$ times the power of a single plough with slide. 4th. A single plough with a friction wheel takes about three-quarters of the power of a single plough with slide. 5th. A double plough, with a friction wheel, takes just double the power of a single plough with a friction wheel. On dry, hard land the above proportions do not hold good, and it is very doubtful if any advantage is gained on land in this condition by the use of the friction wheel. A slide then goes almost equally light, but when the land is wet there is considerable suction between the slide and the furrow bottom and land side, especially when the soil at all inclines to a heavy or sticky nature, whereas the friction wheel runs almost equally lightly on such land, the friction in this case coming on to the axle and nave of the wheel. It is important that the axle should be true and smooth and fit the nave well, and that all dirt should be excluded, in order to reduce the friction to a minimum, and for this reason we bore out the naves of our plough wheels and turn the axles, providing them also with an oil-hole, and exclude the dirt by a leather collar and steel plate at the back of the axle. On land with a rough stony bottom I have understood that the wheel is not so good as the slide, as it rises and falls over all the stones and inequalities, but I have not tried any experiment on such land. Taking the above figures to be correct, and the average draught, on a mixed soil, of a good single plough with slide when ploughing six or seven inches deep, being taken at 24 stone, we should have the draught of a single plough with friction wheel, 18 stone; double plough with friction wheel, 36 stone; double plough with one slide, 42 stone; double plough with two slides, 48 stone. Of course, these draughts will vary on

different soils; and the advantage of the new double plough will be still greater when compared with many of the older patterns of single ploughs still in use, but it may safely be taken for granted that in almost all cases the double ploughs do not draw more than half as heavy again as the single ploughs, and the heavier and more sticky the soil the greater is the gain. The above statement is confirmed by the great trial of double ploughs held at Peterborough, October 4th and 5th, 1870, when the draught experiments were conducted by Mr. Amos, C.E., late consulting engineer to the Royal Agricultural Society of England. The proportion between the average draught of five double ploughs and the single plough of best construction was as 702 to 470, or half as heavy again. On the 15th November of last year another very careful experiment was carried out by the engineers to the Royal Agricultural Society of England, Messrs. Easton and Anderson, through one of their staff, Mr. Kiehe, at Caistor, the proportionate power to move 1lb of earth with a single plough was 14.9, against 10.6 with the double, showing a saving in draught in favour of the latter of 29 per cent. I could easily multiply proofs that there is a great saving in draught, but I think I have said enough. Let us now look at the advantages to be gained by the use of double ploughs. 1st. Double Work: They will do twice as much work as a single plough in almost all cases. Sometimes, when the horses are not fully up to the mark, it may better do rather less than this, but even then a very largely increased amount is accomplished. 2nd. Saving in horse power: As we have seen, the draught is only half as much again; therefore, three horses harnessed abreast will do double the work of two on a single, and not be any harder worked. When three horses are used on a single plough on very heavy land a four-horse team is sufficient for the double, but on very heavy work I should rather recommend two single friction wheel ploughs, worked by two horses each. On many light soils two horses are often employed on single ploughs, because one would hardly be sufficient, and in such cases the same two horses can readily manage the double plough, and not be distressed with the work. Many double ploughs are now being worked with two horses only on light lands. 3rd. Saving of labour: One man with a double can do the work of two men with single ploughs, as when three horses are required they are driven abreast and guided by reins. Working three horses abreast: In using three horses on a double plough, the most effective way is to yoke them abreast, two on the land and one in the furrow, as their power is not only more economically employed, but one man is sufficient with the plough. In this case they should have compensating three-horse whippetrees, so that each horse may have its fair share of work. When preferred, two horses may be driven at length in the furrow and one on the land; but it is very objectionable to work three horses at length, as too much strain is thrown on the last horse on coming out at the headland. 4th. Work done better: The work can at all times be done equally as well as with a single plough, and it entirely prevents a man carrying a plough on its back, and so cutting an uneven bottom, which can be done with a single plough even when fitted with flat cutting shares. As a rule, too, the furrows are more firmly closed and packed together, whilst the additional weight, and the very fact of having two plough bodies working together in the ground at one time, make the plough steadier and less liable to be thrown out of the ground by one of the bodies coming against a stone or other obstacle. 5th. Pan of furrow not so much trodden: As only one horse walks in the furrow, and two furrows are ploughed at one time, the horse walks in each alternate furrow, instead of every one, and the pan is consequently less trodden down. 6th. Furrow bottom not glazed: By the use of the friction wheel, instead of the slide, all glazing, both of the bottom of the furrow and of the land side, is avoided, but they are left just as the share and coulters leave them, so that both air and water can get more freely into the soil, and a better bottom is left for the roots of the plants. 7th. Ploughing hill sides: In hill-side ploughing they are very serviceable, as, by ploughing up and down the hill, two horses can carry two furrows down hill, and by slipping one furrow up hill, the two horses can take one furrow up hill; thus in each round ploughing three furrows against two furrows with the same team on a single plough. 8th. Subsoiling: They form one of the best implements for any ordinary subsoiling. By removing the front plough, and adding

a subsoil tine to follow the furrow horse and subsoil the previous furrow, the hind plough turns a furrow over the loosened earth. In this way all treading of the horses on the subsoiled work is prevented, and generally three horses can plough and subsoil effectively to the depth of ten or twelve inches. 9th. Potato planting: They are very useful for potato planting. By setting the ploughs to the widest width, say twelve inches each furrow, or more if desired, the two carry 2½ inches, and the potatoes are set in the furrow and covered the next round. This ensures the widths of the rows being exactly alike, and facilitates after operations. The boys who plant the sets have not to wait a round, as they would have to do with a single plough. 10th. Paring stubbles: They are very useful for paring stubbles. The ploughs being set to their greatest width, and furnished with broad shares, 12 inches wide, the surface, to a breadth of 24 inches, may be pared at one time with a pair of horses. The greater weight of a double plough keeps it more steadily at the shallow depth of say two inches than is possible with a single plough. 11th. Beginning and Finishing. The ridges, tops, or beginnings can be easily set with a double plough. By taking a small furrow with the front plough on the first half-bout and a full furrow with the hind plough which lies on the first furrow, then returning with two whole furrows to back up the top, three furrows are shown the first round against one with the single. The finishes can also be made, the only care necessary is to keep the ridges an equal width and the furrows parallel, so as to leave an even furrow at last. The best way to finish is to take the last or bank furrow and the mould or brow up at the same time. If two solid furrows should be left at the finish it is as well to plough one off first, letting the front plough slip empty up the open furrow. In beginning and finishing with the double plough, it is a very great advantage to be able to set the hind plough lower than the front one, and in our ploughs we make the front plough body moveable up and down, so that their relative positions may be altered. Although, as I have said, the ridges and finishes can be easily and well done with a double plough, many prefer to keep one single plough going with two or three doubles, in order to set the ridges and make the finishes, and I think at first, at any rate, it is a very good plan, and I am not sure it is not always the best when several doubles are at work together. In order to make the most of the advantages to be gained by the use of double ploughs, it is very desirable to have the lands or stetches as wide as possible, for although these ploughs may be worked, and are a great assistance, even where the lands are narrow, they are much more so when the distance between the ridges is sufficient to enable them to go a considerable number of rounds on each ridge. I have no doubt the adoption of these implements will tend to the practice of setting out a greater bulk of land in wider stetches than hitherto, and also to keeping them as level as possible, which is very desirable for the after operations of both reaping and mowing machines. 12th. All kinds of work: All kinds of work can be done with the double plough, with the exception, perhaps, of ridging or banking up land for the winter. They will do ley ploughing for wheat, stubble, or autumn work, and cross ploughing, and may be worked at any reasonable depth. They can be fitted with all sorts and widths of shares, and with different forms of breasts or mould-boards, to suit different practices and requirements. 13th. Work done at proper time: One of the greatest advantages of double ploughs, besides the saving of labour and horse power, about which I propose to make some further remarks, is undoubtedly the great facility they give for getting the work done at the proper time. That a farmer should be able to get his stubbles broken up quickly in autumn, and his land prepared for sowing when the weather is favourable, is too well appreciated to need any remarks from me. As the double plough gets over a double quantity of work with an increase of only fifty per cent. of horse power as compared with a single plough, the work with the same lot of horses is done much more speedily. Take the case of a farm where twelve horses go to plough with six men and six single ploughs, doing six acres a-day. The same horses, worked three abreast on four double ploughs would do eight acres a-day; consequently, in a week, they would do forty-eight acres, whereas the single ploughs would take eight days to do forty-eight acres. The doubles, therefore, do any given amount of work with the same horses in three-fourths of the time, and, in the above instance, two men would be spared for other work, and the

ploughing being finished sooner, the men and horses would be sooner ready to undertake any other work that might be required on the farm. 14th. Extra time and facility for other operations: As the double plough enables a farmer to get his ploughing done quicker, it greatly helps him in getting on with other work on the farm which would otherwise have to be delayed. This is one of the greatest advantages gained by the introduction of these implements, and one which every farmer will appreciate. 15th. Money saving: On the other hand, and especially on those farms where the staff of men and horses kept has been sufficient to do all the work at the right time, and in a proper manner, a considerable saving in expenditure can be effected by the use of double ploughs. To show this more clearly, I will first take the case of a farm having three hundred acres of arable land, and on which, as a fair average, twelve horses are kept. Assuming—and in some cases I believe the assumption is correct—that no larger number of horses need be kept than a sufficient to do the ploughing, the following calculation would hold good: Six men and twelve horses would be required on such a farm to work six single ploughs, whereas three men and nine horses would work three double ploughs, thus saving three men and three horses. The horses might be entirely dispensed with by careful management, and the men during the time they would have been engaged in using the single ploughs. These three hundred acres of wheat, clover, peas, beans, barley, oats, summerland, or root crops, would take at least two ploughings each per acre on an average, or say six hundred acres of ploughing. Taking one acre per day as the work of each single plough, or two acres per day as that of each double plough, the ploughing would occupy seventeen weeks. The following calculation will show the saving effected: Interest on the value of three horses at £30—£90 at 5 per cent., £4 10s.; annual decrease in value, at £2 each, £6; hazard of loss at £5 per cent., £4 10s.; annual value of food, three horses at 12s. a-week, £93 12s.; shoeing and farriery at £1 each, £3; wages of three men for seventeen weeks at 10s., £35 10s.; total, £137 2s.; deduct interest on value of three double ploughs at £10, at 5 per cent., £1 10s.; total, £135 12s. Say a net annual saving of £135, which is equal to 9s. per acre on the whole farm. This may perhaps be an extreme case, or at any rate not the most usual way in which the saving effected by double ploughs would be taken, though I shall give you presently one or two statements from practical men corroborative of the above calculation. If two horses out of the twelve could be dispensed with, it would save £100 a year, or 6s. 8d. per acre. If only one horse out of twelve could be sold, the saving would be £60 a year, or 4s. an acre. And if no horses are sold, we still have the item of wages £25 10s., which is saved, or equal to 1s. 8d. an acre. On some light land farms where a great deal of the work will be done with two horses on a double plough, I believe quite the above saving may be effected. Three-furrow ploughs: Indeed, on such farms there is no reason why three-furrow ploughs should not be used, drawn by three horses, or even four-furrow ploughs, but one objection to these is the wide headlands they make from one plough having to be fixed behind the other. Three-furrow ploughs have been made many years ago. I found a most interesting account and drawing of a three-furrow plough invented by the Rev. Edmund Cartwright, of Woburn, Bedfordshire, in the year 1804, which was regularly worked on light land with two horses and one man. If this could be accomplished then, why not in the present day with all our modern improvements, and means for lightening draught? In support of my statement that a considerable number of horses could often be dispensed with, I will give you an extract from some remarks made by Mr. Stein at a late meeting of the East Lothian Society. Referring to the saving from the use of double ploughs, Mr. Stein said: "He had reduced his stock from 4½ to 3½ pairs of horses (9 to 7), and he could quite as easily accomplish his work. He worked the plough with two horses in seed furrow, and three horses in stubble. He could work also on stubble with two horses, but he did not think it was economical to do so. With two horses he could turn over two English acres of seed land per day. On stubble land the horses did not go so fast." At a meeting of the Haddington Farmers' Club reported in the *Farmer* of December 25, 1871, Mr. James Wyllie read a most able paper on the double plough, and said: "On an ordinary sized farm the saving effected by them must be very

considerable, and I have no doubt that in some cases from their use a pair of horses might be altogether dispensed with, in which case a direct saving of about £100 a year would be at once effected." At the discussion which followed, Mr. Smith, of Stevenson Main, said since introducing this implement he had reduced the number of his horses and now worked 350 Scotch acres (which are equal to 444 English acres) with four-and-a-half pairs of horses. Another gentleman calculated the saving at 5s. a day for every double plough he used. That I might be able to speak with some degree of certainty of the practical use of double ploughs as they had really been proved in work, I addressed a series of questions to gentlemen in various parts of the country who had bought double-furrow ploughs from us, and I am glad to take this opportunity of thanking those gentlemen publicly for the very kind and courteous manner in which they acceded to my request, and feel that they have helped me in bringing this paper before you to-night, and I think also through the medium of your Club, it will not be without its effect on many who may have hesitated at present to avail themselves of the advantages of double ploughs. I cannot pretend to give you anything like a summary of those reports, which are almost all of the most favourable character, and in the few instances where double ploughs have not proved successful it has either been from a plough being sent which was not suitable to the land, or one of the earliest patterns, which were not so easy to manage as those we have more recently improved. They come from over 100 English farmers residing in 30 different counties, from several in Wales, and a not inconsiderable number (14) from Ireland. However, I will give you a short summary, and will lay the whole of the reports I have received on the table for any gentleman to look over, and also a book containing an analysis of the answers from each one. The reports in answer to the question, "How have you got on with your double plough?" are—"Well." "Very well." "First-rate." "Exceeded my expectations." "Perfectly satisfied." "Could not do without it," and so on. Quantity of work done, "generally double." Number of horses required: In answer to the question, "How many horses do you use on your double, and how many on your single ploughs?" there are 107 replies—

1 uses 2	horses on double to	1	on single.
8 use 2	ditto	2	ditto
77 use 3	ditto	2	ditto
1 uses 3	ditto	3 and 2	ditto
6 use 3 and 2	ditto	2	ditto
2 use 4	ditto	2	ditto
1 uses 4 and 3	ditto	3 and 2	ditto
1 uses 5	ditto	3	ditto
1 uses 5	ditto	4	ditto
1 uses 5 and 4	ditto	3	ditto
1 uses 6 and 5	ditto	4 and 3	ditto

Soil: Out of 111 replies as to nature of soil, 23 are heavy land; 10 are heavy and mixed; 27 are mixed; 11 are mixed and light; 18 are light; four are fen land; one is stony and rocky; and 17 are all kinds of soils. Parting with horses: In answer to the question, "Will the use of double ploughs enable you to part with any horses?" out of 116 reports, 58 say they will be able to part with one or more horses, 24 do not say what proportion; nine can part with one out of four; eight can part with one out of five; six can part with one out of six; one can part with one out of seven; five can part with one out of eight; one can part with one out of ten; one can part with one out of eleven; one can part with two out of four; one can part with two out of six; one can part with two out of nine. Proportion of work done with doubles: In answer to the question, "What proportion of work can you do with the double plough?" the answers vary from "half to three-quarter," "nearly all," and "all." Difficulty or not with doubles: To the question "Have your men found any difficulty with the doubles?" the answers are, "Very little or none." And now to those who may hereafter make trial of double-furrow ploughs, let me say—Don't be disheartened if the work is not so well done at first as you could wish. A little time, thought, and patience will soon enable you to conquer the little difficulties that will at first arise, but which you will find only small difficulties after all. The two furrows must be carefully watched to see that they are equal in breadth and

depth, and this point well attended to will be half the battle in producing good work with any well-made double plough. There is one short extract from the work of Walter Blith, already referred to, which I feel I must give here as too good to be lost, on "The Best Way for the Tryall of a New Plough." "And, secondly, having his plough and all its accoutrements completed, then to the tryall of it, and therein be sure to make the first tryall of your plough upon land, workable and regular lands, not upon lands above measure hard, rooty, rushey, twitehey, or any way infeasible, because upon such lands a true demonstration of the goodness and truth of the plough cannot be discovered, nor any rule can be observed. Because such lands will more easily and suddenly wrench, writh, or put a new plough out of its work before it be wrought into its work; a rough, new plough being somewhat like an unbroken horse, which may easily be spoyled in the hand of a violent madeap rider, but if the horse be kindly used, and taken off his untamedness by degrees, by ease, kindness, and patience, he is made a horse for ever; so after that, in ordinary land, your patient, discreet ploughman have well scoured your plough, brought it to a true furrow both for breadth and depth, and set your irons so it will go itself with the very bearing of the hand to keep it steady, then you may afterward be bold to put it to any service on any lands whatsoever the strength of it will abide, and it may be serviceable for many years." And to the ploughman he says: "I shall dismiss my ploughman with this exhortation—be as willing to learn as thou hast need; and abandon those poor, silly shifts men make to preserve themselves ignorant and unserviceable, as they have been ploughmen all their days, and are not now to learn; and men may as well be too precise, and better ploughs cannot be made than their country affords, and could better have been devised they would long since; with hundreds more so childish as are not worth an answer; but these exceedingly stifle and choak invention." I am afraid I have wearied you with so lengthy a paper; but I must not sit down without thanking you for having invited me to bring this subject before your Club, which I have had great pleasure in doing. Our firm has long been known in the manufacture and improvement of the plough (now nearly ninety years), and I, personally, have had much to do with the working and improvement of the plough for the last ten or twelve years, so that, beyond a matter of business, anything relating to the plough is a matter of interest to me.

Mr. GOODWYN said the difficulty he saw with regard to the introduction of the double-furrow plough was the question whether it could be used on heavy land as it could be on light or mixed soil. There was no doubt it would be a great boon to the light and mixed soil farmers; but he had considerable doubt whether in this heavy-land district they would be able to use it more than at certain seasons of the year. On the average of years he questioned whether in their district two breasts following each other so closely could do the work satisfactorily. If the double plough could be used only for a part of the year, it was questionable whether the saving of horse labour could be effected. The implement would be very valuable after harvest for stubble breaking, and probably it would be available for seed ploughing; but how would it be for ploughing beet land when soaked with water? He should be very glad if it would answer all the year round, and all would be glad to embrace such a system; but there must be great hesitation before they reduced the number of their horses or men, unless they were certain that they could use it all through the year. If he was on a light-land farm he should not hesitate to go in for double ploughs, and discard the single plough; but in this heavy-land district there were times when it was difficult to get the single plough through.

Mr. CHARLES CAPON said there was no difficulty in using the double ploughs from the breasts following too closely, there being plenty of width between them. The friction wheel was a great improvement on the slide, there being nothing for the earth to ball on. He had bought a double plough and had tried it, and did not doubt it was to be made to do all the year round. He confessed that he did not give his fair trial, for he put it on a piece of beet land on a drizzly day, and the beet tops being very bad, they got round the wheels. The plough, however, did its work as well if not better than the single ploughs, and his man liked it.

Mr. GOODWYN said the double plough necessitated wider stretches, and this would require better drainage.

Mr. CAPON said, whether the stetches were wide or narrow, the land wanted to be thoroughly drained.

Mr. GOODWIN said no doubt, but wide stetches required it more than narrow.

Mr. ROBERT GARRARD said he had had a double plough of a Scotch make since Michaelmas, and it had worked uncommonly well. Three horses made two furrows with it more easily than two horses made one furrow.

Mr. CAPON bore testimony to the ease with which Ramsomes' double plough turned. It turned as easily as if in a cart.

Mr. WOLTON said fifteen years ago he saw a double plough very much like the primitive one which Mr. Ransome had shown them in the old book at work at Shotley. It was drawn by two cart-horses and a riding-horse, and was worked successfully for years.

Mr. CAPON, in answer to Mr. Jeaffreson, said he thought he should set up another double-furrow plough.

Mr. RANSOME, in answer to the President, said that cost of ploughing by the double-plough system would be about 6s. 3d. per acre.

Mr. CAPON said the single-plough system cost about 9s. an acre.

Mr. RANSOME said that fellows might be very well ploughed by the double-furrow plough if a deeper breast were used; it would be a good plan to keep breasts on purpose for such work. The breasts would not occupy much time in changing. The double-furrow ploughs could be used on any farm where three, or even where two horses were kept—in fact, where there was a plough used at all.

The PRESIDENT said they would find that Mr. Ransome had given them something that they could sympathize with when he told them that the introduction of machinery rested much on the scarcity of manual labour. Did they not see some signs that they were about to experience a scarcity of labour such as might lead them to try a new invention? He relied more upon the testimony of practical men in the information given to Mr. Ransome than upon the dynamometrical trials, because that information had been gained under different sets of conditions. He quoted Lord Western's saying that he would plough with racehorses if he could, to show that the speed gained by the double system was valuable. He would suggest a modification of the tires of the wheels to prevent clogging in bad weather.

Mr. JEAFFRESON proposed and Mr. GARRARD seconded a vote of thanks to Mr. Ransome.

FREE TRADE IN BEER.

At the meeting of the Norfolk Chamber of Agriculture, the Reverend JOHN GUNN read the following paper, On the Advantages of Free Trade in Beer, subject to Police Regulations and Inspection:

I gladly avail myself of this opportunity to submit to the consideration of the members of the Norfolk Chamber of Agriculture the best practicable means of supplying the labourer with good and cheap beer. You will agree with me that the Malt-tax is a most cruel and disgraceful impost, which deprives the labourer, who toils to raise the barley, of the beer which is requisite to recruit his strength. Hence, with the imposition of the Malt-tax, commenced a system of demoralization by which that which ought to be a portion of the labourer's daily meals is reduced to become an article of occasional merriment, and the abuse of malt liquor was substituted for the use of it. Under parching thirst, moreover, the labourer is tempted to buy beer at a higher price than in justice to his wife and family he can honestly afford to give. This exorbitant price is mainly, but not entirely, caused by the Malt-tax. Hence we see its demoralising tendency, inasmuch as it tempts him to break the first laws and the dearest ties of nature; which is worse than the vice of drunkenness. I do not mention the injury done by the discontinuance of the practice of cottage brewing, great as it undoubtedly was, because it may be questioned whether, if the duty on malt were entirely repealed, the labourer would again return to it. And for this reason—we all remember the slopping there was in making ginger-beer at home, but now that we can buy ginger-beer cheaper and better than our wives can make it, we have given it up. Just so I believe it would be with home brewing. It would be to a great extent superseded by the excellent beer which the public brewer would furnish us with under a system of freetrade and competition. Great as the evils are which are caused by the duty on malt, they are greatly aggravated by restrictions upon the sale of beer, which create a monopoly, and tend to open the door to the sale of an inferior and perhaps an adulterated article. The injurious effects produced by the use of intoxicating drugs are too well known to be described. The beverage—I will not call it beer—is calculated rather to stimulate than allay thirst, and, by inducing the thirsty soul to drink to excess, causes not only violent and immediate outbreaks, but leads to lasting habits of intemperance. I am happy to say that such injurious effects are much less frequent than they used to be since an extension of licences has taken place, notwithstanding that the sale of beer is greatly increased. But still there are some well-meaning but ill-judging persons who are endeavouring to meet the evil by shutting up as many public-houses as possible, and resisting the opening of others. The consequence of this is that the monopoly is increased, the value and rent of the favoured places are

raised, and the publican is tempted to have recourse to unfair practices in order to recoup himself. Such would have been the working and the result of the proposed Government Bill, by which the number of houses for the sale of beer would have been reduced, and some would have been put up to public competition. Large sums would no doubt have been given for them, and the consumers of beer would have been ultimately mulcted for the payment. Probably such an infringement of the laws of Free Trade and interference with the supply and demand are unexampled. The injustice of the restrictive system was brought to my apprehension very vividly some years ago in a case in which I was personally interested. On the retirement of a near relative from the business of a brewer several public-houses were put up to sale, and they fetched from £500 to £1,200 each, while their intrinsic value as dwelling-houses would not have exceeded £100 on an average. Who, let me ask, paid for this excessive price, which was due to monopoly? It was, no doubt, the consumers of beer, and principally labourers. The independent brewer, who relies solely upon the merit of his beer for its sale, would be shut out and injured by such a monopoly. I have often inquired at public-houses where inferior beer is sold whether they are free or tied, and the invariable reply is, "I wish it were free." "Why so?" I asked again; and the rejoinder is, "Why, then I could go for my beer when I liked." I humbly submit that beer ought to be sold as bread or any other commodity, without any impost or restriction, except a nominal payment for a licence for the purpose of giving notice to the police and the excise. Competition would insure a genuine and wholesome beverage; and if the duty on malt were reduced, for instance, one-third, the benefit would reach the consumer, and would not be retained in the pockets of the brewer. A cheap article would then be produced at an easy distance from the labourers' homes, so as not to become flat and stale by its being carried from the distance of the present range of public-houses. It would thus become an item of the daily sustenance of the labourer, and the use would be substituted for the abuse of malt liquor. It may safely be assumed now that not one out of twenty labourers drinks as much beer as he ought to do for his bodily support and refreshment, and therefore there is a wide margin left for the increase of consumption, which would far more than compensate the revenue for the proposed reduction of the present duty on malt. The Chancellor of the Exchequer ought not to grudge the trifling sacrifice of the licence duty, for to insist upon that, as well as the malt-tax, resembles the Irishman's mode of lengthening his blanket by cutting off a piece at one end to add to the other. With respect to the moral effects produced respectively by the free and by the restrictive systems, they appear to

me to be decidedly in favour of the free. In the parish of which I was forty years incumbent, some well-meaning persons succeeded for a time in closing all places for the sale of beer, and I can truly affirm that the measure was morally injurious. Some of the people clubbed together to purchase gin, and met on the Sunday at each other's houses to drink and play cards. Again, when the labourer has to walk about two miles to a public-house, situate in another parish, he does not think it worth while to walk so far for a single pint. He indulges in more, and returns reeling home. He is under less restraint in a more distant place, being less known, and, if young, not unfrequently amuses himself by pulling gates off their hinges, and sundry such freaks, which he would not venture upon if the public-house were nearer his own home. I may safely affirm that there are more confirmed sots generally in places where there are no beer-shops than where there are, owing to the facts that they drink more at a sitting and are less under restraint. Such is the case in country parishes, but how would it be in towns where public-houses are about 100 yards about? Suppose half of them to be closed, and the consumers to have to walk 200 instead of 100 yards. What real difference would it make to them so far as regards the distance? None whatever; but competition would be less, inferior beer would probably be sold, and a larger number of drinkers would be congregated in consequence of the diminution of the number of places of retail. Viewing the subject in every point, it is my conviction that the advantages, both physical and moral, are in favour of an unrestricted trade in beer—*i. e.*, the leaving the number of houses to be regulated by the ordinary relations of supply and demand; provided always that the sale be subjected to the strict surveillance of the police, and to inspection in order to prevent the use of deleterious drugs. I rely, however, upon free competition mainly to insure a good, wholesome, and cheap article, and to increase the consumption to such an extent as to compensate for loss that would otherwise be sustained by the revenue from the reduction of the malt-tax. That such an increase would arise may be assumed from the fact that, under present arrangements not a tenth, I might say twentieth part of beer is consumed in agricultural districts that ought to be at the labourers' daily meals. In consequence of the duty on malt and its high price, the master no longer or very rarely gives home-brewed or any description of beer to his men. The labourer himself cannot afford to buy malt and brew, except at harvest or harvest time, when his pay is higher and his work more severe than usual. There is therefore a vast field open for an increased consumption of beer in agricultural districts, and to some extent also in manufacturing. There is, moreover, room for a very considerable reduction of the receipts or profits of the retailer per barrel, which would be lowered by competition at the same time that a larger draught would compensate him. Competition also would prevent the brewer from appropriating the amount of the reduction of the Malt-tax. Without an open and unrestricted trade, both in brewing and retailing, such a reduction would be ineffectual; and it may be questioned whether the total repeal of the Malt-tax would greatly diminish the price of beer, if the sale were much restricted. Private brewing would, however, to a certain extent operate as a check upon overcharge by the wholesale brewer, and if he failed to supply good and cheap beer, the advantage of brewing for himself would be open to the agricultural labourer; but it is in vain to propose or to rely upon the repeal of the Malt-tax, for if the labourer was to wait for his cheap beer till the duty on malt is repealed, it is very doubtful whether the man is now living who will enjoy it. If the consumption of beer were to be as general and extensive as I suppose, it may be asked, Whence can the requisite supply of barley be derived? If inferior barleys could be malted with advantage, the quantity of barley might be doubled in England. I reply that inferior barley (which I am informed would double the quantity) would be malted and become productive of duty, and then there would be different prices of malt according to its quality; and if that be insufficient, a supply of malt must be obtained from foreign countries subject to duty. The result of Free Trade in beer concurrently with a partial reduction of the Malt-tax, would be that the revenue would sustain no loss; the brewers, who rely upon the quality of their beer and not upon the possession of public-houses, would have the advantage of fair play and no

favour; the labourer would be supplied with good beer at such a price as would be within his means to buy, as an item of his daily food and without injury to his family; a profitable employment would be open to many as retailers in every parish; and the beer would no longer become flat by its being carried a considerable distance as at present. Temperance on principle would take the place of compulsory abstinence, which must not be mistaken for sobriety; and, thus, what I am desirous to promote would be accomplished—the use of malt liquor would be substituted for the abuse.

Mr. SEWELL READ, the chairman, reiterated what had been stated about the farmers not being at one on this question. If they were uniformly to demand it throughout England, they would soon get rid of the tax. But even in Norfolk there were differences of opinion amongst farmers. Three gentlemen in Norwich Corn Hall on the previous Saturday, and two at Lynn on Tuesday, said to him exactly the same thing—namely, "We have got a pound for our barley. Let the Malt-tax alone." Now, he protested against this style of argument, because it was based on ignorance. Let those gentlemen be asked, how they should like a similar tax upon flour, and how that would affect the price of wheat. It would depress the value of all wheat, and in all probability make ordinary wheats unsaleable. A great many farmers had this year, to his knowledge, grown decent malting barley; and where it was sold as malting barley, the malt duty paid upon it exceeded considerably the rent paid to the landlord. Last year, 195,000 acres were grown with barley in Norfolk; and he believed there was not a single coomb of barley grown in the county but what would have made very good beer. Supposing that was all used for malting purposes, they would pay in Norfolk alone upwards of £900,000 to the Malt-tax. Thus it was seen that the tax pressed so unfairly upon one portion of the country. Why should their particular and best produce be taxed in this manner, while almost all other agricultural produce was free? Mr. Gann, in one portion of his excellent paper, had suggested where the barley should come from. That would undoubtedly be wanted in case the Malt-tax were abolished. In Great Britain was grown 3,500,000 acres of wheat, and only 2,300,000 acres of barley. He was positive that they might, if there were a uniform good price for barley, grow just as many acres of the latter as of the former. What Mr. England had said about the steam plough and clayey lands was decidedly true. The occupier of strong lands would now be able to grow a larger portion of barley with the aid of artificial fertilizers on their wheat stubbles. There had been perhaps too many public-houses even in Norwich as well as in Liverpool. He did not exactly know what restrictions were put upon their number; but there was quite a different thing in selling beer like bread and butter over the counter to selling it at a public-house. There need not be any restrictions placed upon that sale except good police regulations, and they, as a Chamber of Agriculture, ought to go more for the free sale of beer over the counter for the labourer, than say many words about the public-houses.

PARTY POLITICS AT AGRICULTURAL MEETINGS.

—At the annual meeting for the revision of the rules and prize lists of the Bedfordshire Agricultural Society, at Bedford, the president, Mr. James Howard, M.P., in the chair, the subject of politics being discussed at the annual dinner of the society was warmly debated, and the meeting unanimously resolved that in future party politics should be rigorously excluded. It was urged that if the county members wished to address their constituents, they should follow the example of borough members, and hold a special meeting for that purpose. The chairman and others held that, although the practice had become common throughout England for county members to avail themselves of the meetings of the agricultural societies for addressing their constituents, it was nevertheless a prostitution of such meetings, and altogether foreign to the objects for which they were founded—*viz.*, the promotion of agricultural improvements. The Earl Cowper, K.G., has accepted the presidency of the society for the present year.—[This appears to be a very sound conclusion; but of course a strong line must be drawn between the politics of Party and the politics of Agriculture.—*EDITOR F.J.H.*]

INDIVIDUAL PROVIDENCE FOR OLD AGE.

At a weekly meeting of the Society of Arts, a paper on "Individual Providence for Old Age as a National Question" was read by Mr. George C. T. Bartley, Treasurer of the Society. The Earl of Derby in the chair. The theatre was crowded.

Mr. BARTLEY read his paper, the heads of which are as follows: 1. On the means which now are in active operation, and are understood more or less by the industrial classes, for encouraging habits of providence, and how they are made use of; 2. How they fail to provide for old age; 3. On the means which do exist for enabling a man to put by, in small weekly sums, for old age; and 4. On the means which it seems desirable should be taken to encourage providence for old age, and to make known among all classes the facilities which exist for this purpose. To secure the ends he was aiming at, he thought that these arrangements would be desirable: 1. That an association of large firms, employers of labour, and the leading members of the industrial classes, be formed, to extend information amongst all persons as to the facilities afforded by the Post-office, and other means which exist for encouraging individual providence, and the benefits to be derived therefrom. 2. That firms and houses of business be urged and assisted by this association in forming on their premises offices for the receipt of proposals for annuities, &c., and the receipt of premiums. That persons be encouraged to allow the premiums to be deducted regularly from their wages, and that arrangements be made for systematically carrying this out. 3. That the association adopt the idea, and try to promulgate it, of regarding a man's policy of insurance, annuity documents, or any proof of providence, as part of his character in seeking employment, and endeavouring gradually to spread the system of considering some such provision as a regular condition of employment in new appointments.

Dr. STALLARD recommended house to house visitation by the middle to the working classes.

Mr. DUDLEY BAXTER said that the scheme brought before them was a system of making provision for old age by a very elaborate machinery. Was that elaborate machinery—the system of week-to-week continuity through life—the best system for the working classes? He for one did not think it was. The system advocated was one of life assurance or annuities, either through benefit societies, savings' banks, or that involuntary voluntary organization of which they had heard so much. But all that required continuous effort from the age of say 20 to 55 or 60; and the working man was not likely to be able to make such an effort. He did not, indeed, wonder that only 339 persons out of 30 millions had availed themselves of it. Another reason why a system good in theory was not available in practice for the working classes was that investments in Government securities produced a very low rate of interest. There should be immediate return to attract the poorer classes. The practical solution of the difficulty appeared to him to be not so much the encouragement of an elaborate system of annuities as of a habit of laying up small savings with a view to their being invested in good securities—houses or lands. He regarded building societies as a great advantage to the working classes, because by their means they obtained good security for their money, either by living in the houses, letting them, or dealing in plots of land. The suggestion, he thought, deserved consideration, and he hoped that by every possible means the working classes would be advised and urged to make small weekly savings and profitably to invest them, as being a way of making provision for old age.

Mr. E. W. HOLLOND advocated the extension of the hours during which Post-office Savings' Banks were open for the receipt of deposits, the present hours of 10 a.m. to 4 p.m. being most inconvenient for the working classes.

Mr. GEORGE HOWELL said that the working classes were accused of not making provision for old age through ignorance and indifference. He maintained that inability to do so was the true cause. How, he asked, could the labourer in towns, or the agricultural labourer lay by any amount of money for old age? If they had anything to spare they put it aside for a time of sickness or enforced idleness. The skilled workman

had reasonably good wages, but not sufficient to make the continuous effort advocated. During 13 years he had had himself wages ranging from 36s. to 40s. a-week, but when he made allowance for loss of time, want of work, and sickness, the average was only £1 0s. 9d. What was required was some organization whereby savings could be readily invested at interest and be available for a time of sickness and want of work. He hoped the day would come when it would enter the mind of some practical statesman to apply the building society system to the Post-office Savings' Banks. What the working classes required was the ability to save, and not the will.

Sir CHARLES TREVELYAN feared that the habit of providence had disappeared from amongst us, if indeed it ever existed in this country. He had within the last few weeks gone through with committees of poor-law guardians and officers, clergy, district visitors, and sisters of charity, entire lists of the poor of one parish and the greater part of another, and he found it was hardly possible to trace any appearance whatever of savings. If it did exist at all it was almost confined to former domestic servants. The increase of wages went rather for harm than good, the sums spent in drink amounting to the revenues of many kingdoms. In truth, for many years we had been living contrary to the first law of God, which was that we should earn our bread by the sweat of our brow, and from this law the poor-law system exempted the people (No, no). The administration of many charities was such as to pauperise the poorer classes, and the entire system needed reform. Instead of giving legal private charity, with both hands open, there should be previous and full investigation to ascertain whether the person applying had done the best for himself or herself ("Question"). The existence of great national improvidence was not caused by any want of ability on the part of the working classes to make provision for old age, and this fact, he thought, would be ascertained by all who thoroughly investigated the subject.

Mr. JOHNSON feared that to inculcate the principle of self-providence would eventually lead to selfishness.

Sir JAMES SHUTTLEWORTH said his experience lay on the two sides of the question. Nearly forty years ago he was engaged in introducing the poor-law system into districts where wages were at the lowest rate, and he lived in Lancashire, where wages were at the highest. He could not say that many labourers in the North were not distinguished by their providence. Within twelve miles of his house £750,000 had been invested by the working classes in co-operative mills, besides a vast sum in co-operative stores. But there was a vast proportion of the labourers of the county who could not make provision for old age. Much might be done by lessening improvidence, much by the saving of £70,000,000 at least out of the £100,000,000 spent annually in drink, much by a reform of charity administration. But it was not to any of these, but to all, they should look, and not to a simple economic problem, to remove the great evil which admittedly existed.

Lord DERBY said: Probably you will expect that, as chairman, I should say a word or two. I confess I do so with some difficulty. The subjects which have been touched on are so vast that, with thought and preparation, one could talk about them for five hours; but without, it is really very difficult to talk about them for five minutes. I think there is no resisting the conclusion to which different speakers have come—that in this matter of economy and prudence we stand rather low in the scale among European nations. The French are undoubtedly before us. There are no persons in the world who are more thrifty than the peasant farmers and small proprietors and the small traders in the towns of France, who together make up so large a proportion of the French population. The Swiss, too, are before us; so also are the Dutch; so undoubtedly are the Northern Italians; and, but for the very sincere respect which I entertain for whatever falls from Mr. Dudley Baxter, I should be inclined to think that the North Germans are in the same ease. If any one asked me what is the cause, or rather what are the causes, of this state of things, I

should be very much perplexed to give him a solution of them. Perhaps there is something in the fact that from our colonising and commercial habits, from our wide-spread commercial relations with all parts of the world, we have been in the habit as a nation of making money faster than our neighbours, and that there is always a tendency to spend rapidly that which has been easily obtained. Well, again you have a not inconsiderable class amongst us—artisans who combine a very high development of skill in their special industry with very low general culture. That is the class of man who spends all he gets. He does not save, not from any particular objection to saving, but because the idea of doing so has never got into his head. He has, perhaps, maintained his parents in their old age, and he thinks it is very natural that in his old age his children should maintain him. Perhaps there is this further explanation. I think it will be found that there is in all classes of society (although among a very small majority) a lingering feeling that there is something mean and selfish in the habit of saving. I have heard that language used by educated men, and it has this infinitesimal truth, that people who set about making provision for their own future are very apt to overlook the claims of their neighbours. There is another cause. You will have observed the infinite amount of injury locally done by the failure of savings banks and associations of all kinds in which the savings of the poor man were invested. It is intolerable for the poor man who has for twenty years perhaps piqued himself upon his savings, while his neighbour, who did not save, was enjoying himself, to see that he has not only lost the pleasure which he might have had, but his money also. I am aware that this is less likely to occur under the present system in respect to savings banks; but this I say, that a single failure of that kind is a lesson of improvidence taught to a whole neighbourhood. Well, as to the scheme of to-night, which I take to be that employers should require those whom they employ to make provisions for their old age, I think it is open to this criticism—namely, that such employers must have the command of the market to a greater extent than is actually the case. You cannot make a provision of the kind unless you have command of the market, and therefore you cannot dictate to the employed what terms you please. It is not practicable, except in rare instances, unless you are prepared to pay to those who adopt your scheme a higher rate of wages than generally rules in the neighbourhood, and in that case, although you talk of it as if the men were laying by for themselves, it is not so, for it is you who are laying by for them. And thirdly, it is not practicable, unless you find that the men you employ are willing to come into a scheme of the kind; and that, I apprehend, as men's feelings are now, they would not be very likely to do, because they dislike, as we all know, interference of any kind with their private affairs—and interference of this kind is probably not such as would recommend itself to their feelings. No doubt, too, those great associated unions which have exercised one way or another so much power would be extremely jealous of any interposition of that kind on a great scale on the part of the employers. But while I differ as to the remedy, I quite concur as to the extreme importance of the subject. The creation of provident habits is a matter of national as well as of private interest. Saving men are safe men—while men who make a row and head mobs, and make themselves generally unpleasant to their neighbours, are generally those who have not got a shilling laid by for a rainy day. No doubt economy, like everything else, may be carried to an extreme, but it is not an extreme which we are in any danger of running into in this country. The difficulty is the other way. Dr. Stallard says very rightly that we want somebody to set the example. That is true. But, unfortunately, when you get a man to set an example in a neighbourhood you generally find that he is the most unpopular man going. Now, this question of individual prudence and provision for old age opens the infinitely wider question of the operation of the poor-law, and of all laws in the nature of the poor-law, and their effect upon the formation of individual character; and as to that, perhaps I should say that there is no subject on which we require more to be taught to reason quietly and calmly, or on which we are liable to fall into one of two extremes. Sometimes we take the compassionate fit, and then we are in the habit of talking the wildest socialism, although we do not mean it. Sometimes we take the economical fit, and we talk that which, if acted on—happily it cannot be—would be apt to bring about a revolution

in less than 50 years. The question of enforcing providence is a very difficult one, and the difficulty increases when those who are alive to the importance of the subject are well off, while those who have to receive advice upon it are those who themselves create the existing difficulty. It is very well to say that men are to be made more than they are responsible for the way in which they have chosen to live. Well, if you could deal with the man himself, that would be right enough. Nobody, I suppose, would feel very much for a man who has been utterly improvident and reckless, and who has brought a certain amount of discomfort upon himself in his latter days. The difficulty is that the man who is in fault is one person; those who suffer are others. It is not the man himself. He is dead or disabled. It is his wife and children upon whom the penalty falls, and it is very hard to say in that case that because he was in fault you will not help them. At the same time, if you look at the other side of the question, it is quite evident that if every man had a perfect assurance that, although he made no provision for his family, they would be none the less made comfortable by society in general, there would be almost an end to individual saving. It is not, therefore, an easy problem to solve. You must rely, I think, more on hope than on fear. You cannot tell a man that if he does not lay by, his children will starve, but you may tell him that if he does they will be in a much better position than if he does not. Something was said to-night about the impossibility of expecting the working classes in the agricultural districts to lay by, and I am afraid I must agree with that. But they are not the whole. They are not perhaps more than the bare majority of the class paid by weekly wages, and anyone who knows the position of the artisans in our manufacturing and other great towns cannot doubt that they have abundant opportunities of laying by. The manufacturers have been coining money during the last two or three years, and wages have been higher than at any former period, but I am afraid that the amount of money remaining in the hands of the workers is not very large. My conclusion is a very simple and humble one. I do not think any scheme, however well devised, would be more than a palliative of the evil which we all admit. The whole question is one of national character. We have been improvident, and I fear we always will. You cannot change national character in a day—you may in a generation or two; and all you can do is to keep public attention fixed upon those matters, and to give every encouragement which the state of society reasonably and fairly can give to the working classes to lay by and make provision for a time of need.

THE WANDSWORTH INFIRMARY FOR ANIMALS.

—A new building has just been opened near the Nine Elms Station in the Wandsworth-road, out of the proceeds of a bequest by the late Mr. T. Brown, of Rosely-hill-park, Dublin, who by his will bequeathed to the University of London a certain amount of stock in the Three per Cent. Consolidated Bank Annuities, together with the residue of his personal property, for the purpose of "founding, establishing, and upholding an institution for investigating, studying, and without charge, beyond immediate expenses, endeavouring to cure maladies, distempers, and injuries any quadrupeds useful to man may be found subject to." The institution was to be established within a mile of either Westminster, Southwark, or Dublin: to be presided over by a professor or superintendent, who should give at least five lectures annually free to the public. The buildings which have just been completed and opened, and which are called the Brown Animal Institute, cover an area of an acre and a-half of ground, and consist of three blocks. The first is for the accommodation of animals under treatment and observation, and consists of a five-stall stable, five other separate rooms, a dead-house, and post-mortem room, and a stove for cooking the animals' food, and there is also a dog-kennel in a semi-detached building. The second block contains the chemical laboratory, the private room of the professor superintendent, and an apparatus room, in which is a furnace and other arrangements for making scientific observations. The third block contains the rooms of the resident officers. Dr. Sanderson has been appointed the professor superintendent, and will deliver the lectures. The arrangements provide for the public sending sick animals to the institution for treatment by merely paying incidental expenses, whilst the labours in the laboratory will include the studies of the cattle-plague, small-pox, pleuro-pneumonia, foot-and-mouth disease, and other ailments to which animals are liable.

FARMING IN IRELAND.—A DAIRY FARM.

BY THE NORTHERN FARMER.

Having in these columns already described the working of a farm on which a fixed rotation is successfully carried out, corn and green crops largely grown, and cattle finished in the best manner on the latter, for the English and home markets, I now propose illustrating the subject still further, by describing the working of a farm in the same county on which corn-growing is reduced to a minimum, being confined to the field which must of necessity be broken up for green crops, and that on which they have been grown during the previous season, the dairy, rearing young stock, and a flock of well-bred ewes, constituting the branches of industry principally depended on as sources of profit. It will be observed that such a mode of farming does not comprehend the extreme view taken by a large section of agriculturists, ignoring labour, and altogether excluding the growth of root-crops, but it appears to me that it strikes a happy medium, lowering the weekly expenses for labour, and in a corresponding degree all the other outgoings of the farm, without seriously interfering with its receipts. A system that admits the necessity of winter food, and makes preparation for it in due season, growing the crops which a bountiful Providence has placed within reach of the tiller of the soil, is based on sound principles, and can scarcely fail of proving financially successful. The constant and continually increasing demand for fairly-bred, well-conditioned young stock that now exists in these kingdoms places the farmer who breeds and rears extensively in a very safe position. Once fully stocked his purchases need consist but of a sire or sires according to the extent of his herd, these sires, if judiciously purchased, losing nothing when sold to the butcher, and giving their services, often invaluable, for nothing more than the food they consume while on the farm. Much annoyance, loss, and uneasiness of mind is thus avoided, and attendance at fairs is confined to one object, viz., the disposal of surplus stock. To keep cattle in such condition as that they may be got rid of at paying prices at any season, a considerable breadth of root crops must be grown, the supply of food thus gained enabling their owner to preserve his stock in an improving condition from the earliest period of their existence, and to obtain the highest value going for animals of their class on the day they leave the farm.

In elucidation of these principles I proceed to describe the working of a dairy and stock rearing farm in the county of Cork, with the management of which I had recently an opportunity of becoming acquainted, every particular having been shown or described. This farm has none of the natural advantages possessed in such a large degree by the one I have already described, being rather light, and for the most part resting on a hungry gravel, which quickly eats up whatever manure is placed upon it, requiring very frequent applications of farmyard dung to keep it in anything like heart. A dry summer tells very soon, burning up the herbage, depriving it of succulence, and very speedily placing the stock on such a short allowance of food as to necessitate assistance from some other source than the supply obtainable from the pastures. Such land may at first sight appear but ill adapted for the profitable working of a dairy stock. And so, indeed, it would inevitably be were arrangements not made to provide a supply of food sufficient to furnish a morning and evening feed during the whole of the time the cows

continue to occupy the pastures, never omitting it even once. At no season of the year is hay largely used in feeding cattle of any kind, it being (quite contrary to the opinion of a numerous class of Irish agriculturists) considered considerably more expensive than roots, in consequence of its extensive and repeated growth scourging the land, injuring the roots of the grasses, and seriously affecting the succeeding year's pasturage. Turnips, on the contrary, improve the soil on which they are grown, the high manuring which a heavy stock gives an opportunity of applying, and the cleaning and grubbing given in the working of the crop, completely renovating the soil, and preparing it for forcing as good grass for a few subsequent years as the nature of the soil will permit. This farm contains about 400 acres statute measure, and in the first week of November, 1871, the live stock consisted of 56 in-calf cows and heifers, 26 two-year-olds, 32 yearlings, 200 breeding ewes, 17 horses of all ages, and a number of pigs. It may well be conceived that such a number of mouths required a considerable bulk of food for even one day's consumption, and a good deal of care and anxious consideration required to be exercised to prevent the supply of one variety of food falling short before the season was sufficiently forward to furnish abundance of that meant to succeed it. The whole of the milking stock were originally Ayrshires, imported direct from the district from which they derive their well-known designation; but the demand for young stock of bigger bone and greater substance than this breed can attain to, seems likely to throw them out of fashion, not only on this farm, but in whole districts to the west of the county, where at one time it was supposed they had merit enough to supplant every other breed. Bulls of pure Shorthorn descent having invariably been used here, the young stock from half-bred cattle now begin to assume the aspect and substance of the Shorthorn, and to show more of the distinctive qualities of the latter than of the Ayrshire. The difference in value of a pure Ayrshire heifer and a half or three-quarter bred Shorthorn on exactly the same keep from the day of their birth to the day of disposal, and sold in merely store condition, is estimated to be not less than £3 for each year. Thus, a yearling Ayrshire bringing £5, the Shorthorn cross from the same pastures will easily bring £8, and be in considerably greater demand, the former as a two-year-old bringing £10, the latter will without difficulty realise £16. On a farm rearing forty calves each season, such a marked difference becomes a matter worthy of the most serious consideration; and, however favourably the Ayrshire may be regarded on account of her hardiness, economical consumption of food, and acknowledged superiority as a milker on indifferent pastures, she yet must give place on all farms where proper shelter is provided, and where liberality of feeding is the rule and not the exception, to her powerful rival the Shorthorn. The calving of the cows is so arranged as to constitute what is usually styled a summer dairy, this in a country district being found the most profitable and convenient arrangement. Extensive butter-making during the winter months entails a vast amount of extra trouble, and good quality being so hard to obtain when the stock are principally maintained on roots, much annoyance is avoided by the majority calving in spring. For the sake of the calves it becomes desirable

to have the period of parturition as early in the season as possible, it being found from experience that those dropped in February and March maintain a precedence in size and value over those calved in April and May, not explainable on the mere ground of a few weeks' difference of age. The whole of the milk is set for cream, from thirty-six to forty hours being the maximum time it is permitted to stand before skimming during the heat of summer, it being scarcely possible to ensure first qualities if allowed a few hours longer. The advantages of skimming early are here considered to be many. First of all, during very warm weather, the cream rises quickly, and the whole of the produce as nearly as possible is got in the time specified, while the milk, still retaining its sweetness, is much more valuable for calves than when withheld until decomposition has commenced. The butter, salted and packed in firkins, is forwarded to the Cork Butter Exchange, to be there classed and branded for exportation. Singularly enough, the farmer or produce, whatever his rank as an agriculturist, by the rules of this great exportium for the collection and diffusion of dairy produce to every part of the world, cannot sell direct to the export merchant, but must consign it to a broker, who pays the farmer for it at the published price of the day, charging 1s. a cwt. commission on the transaction on his own account, and 2s. on the part of the merchant, so that the producer pays 3s. per cwt. commission for the convenience which he cannot or rather will not be permitted to do without. Some men grumble at existing arrangements, and occasionally dispose of their butter elsewhere for a brief period, but in the end are only too glad to return to the home market and place themselves under the protecting wing of the Committee of Butter Merchants. Taking everything into consideration a fairer market for the disposal of dairy produce could not be had, and there can be nothing surer, that notwithstanding all apparent inconsistencies, every man gets the quality for his butter which it actually deserves, and if through greed milk is left down until the cream is rotten, it is hard for the owner of butter so made to expect the same price as is paid for butter made from sweet cream. Repeated disappointments, however, seem utterly unavailing to teach some people common sense, a glance at the market returns, showing each day a large proportion of thirds, fourths, and even fifth qualities, a state of affairs only attainable by the most glaring intentional neglect in the management of the dairy. As has been already noticed, house-foed on such a dry soil is imperatively required every day throughout the year, and an effort is made to meet this want by a little extra attention. It did not appear to me that there was much difficulty apprehended in being able to keep up the supply, nor yet that a very large variety of crops were required, nothing being done but what anybody else could do with ease, making one wonder how house-feeding was not more general than it is—nay, why, in fact, it is not universally adopted, its advantages being so numerous, and so easily ascertained. The principal crops for summer house-feeding are trifolium incarnatum, tares, and the autumn growth of clover, on the land from which hay has been taken. It will be observed that these are the simplest grown of all the crops suitable for this purpose, and they are selected for the obvious reason that, with liberal treatment, they are capable of being forced to an immense bulk per acre; and, requiring no cultural operations, with the exception of the preparation of the seed-bed, the popular feeling against labour is fallen in with to a considerable extent, and yet not to the neglect of highly important and profitable considerations. Taking the summer season to begin on the 8th of May, the first crops ready for cutting are the piece of trifolium and winter tares, according as the

winter may have dealt more or less tenderly with either. By the end of May, the increasing strength of the sun will have so warmed the soil as to force both crops into all the luxuriance the manurial dressing given at seed-time is capable of affording, creating such abundance as to let the cattle depending upon them get as much as they can consume without waste. The autumn-sown crops cleared off, a spring sowing of tares immediately succeeds, an endeavour being invariably made to have it in so early in the season as to be fit to be off in time for white turnips at least. As a fair crop of the latter can scarcely be calculated on if sown later than 20th July, there occurs a few weeks' interval before the second crop of clover becomes available. This is met with the greatest ease by having a reserve of mangel-wurzels held over from the spring. Thirty or forty tons of well preserved roots become at this time of year doubly valuable, keeping the succession unbroken, and linking the finish of one season to the commencement of another in the easiest and most economical manner possible. A rick of mangolds spared from the spring, comes useful in many ways, causing plenty at a period of the year when there is often real scarcity, should the summer chance to be an excessively dry one. If the whole are not required for cattle, they can be utilised by giving to pigs, stores doing well on them, either raw or boiled. By the 15th of August, clover will in ordinary years be fit to cut, giving a morning and evening feed, liberal to repletion, till well on in October. Mangold tops succeed the clover, continuing to give an abundant feed for about four weeks, it being impolitic to endanger the safety of the roots by permitting them to remain in the ground beyond the 20th of November, for the sake of the feeding value of the leaves. The season has now been reached when white and yellow turnips may be given with great propriety, the products of the dairy having become so trifling that superior quality is no longer the exclusive object. The better keeping sorts of roots succeed each other until summer again wears round, the succession thus continuing unbroken throughout the year. As already stated, hay is estimated here at a very high value, and is accordingly not given to dairy cows until they have calved, and the new season again commenced. Bruised furze is used instead, two feeds daily being given for a period of between three and four months. Further on I will describe the growth and preparation of the furze a little more particularly, no less than 15 acres being devoted to its cultivation, horses, cows, and young cattle being fed on it while it lasts.

It will be seen from the above description of how house-feeding is carried out, that it cannot but prove highly beneficial to the farmer who takes the trouble of attending to details, reducing it to a system, and adhering to it rigidly. In the first place it becomes evident that considerably more stock can be kept on the pastures than could possibly be the case where nothing external to what these will afford is provided. The cattle when turned out after being milked are full, and care only to rest, instead of being on foot for the greater part of their time collecting food, which on light undulating land they must unavoidably be where house-feeding is neglected. Their produce is more regular, and in consequence the yearly average is raised considerably, the cows all through a protracted period of great heat or drought being scarcely affected by what under less favourable conditions would nearly run them dry. The manurial condition of the pastures is continually improving, the excretions being not only in greater quantity, but containing the elements of fertility in far greater degree, than when they are compelled to trust to the pastures alone for subsistence.

THE CENTRAL CHAMBER OF AGRICULTURE.

A meeting of the Council of the Central Chamber of Agriculture took place on Tuesday, Feb. 6, at the Salisbury Hotel, Salisbury Square, under the presidency of Mr. Edward Henegge, the chairman for the current year.

Sir M. H. BEACH, M.P., moved addresses of congratulation to the Queen, and to the heir apparent, on the happy recovery of His Royal Highness.

The CHAIRMAN suggested that the address should be carried without a seconder, and by acclamation, which was done.

Mr. PELL, M.P., in the absence of Sir M. Lopes, laid before the Chamber the following report from the Local Taxation Committee:

In presenting this report your committee are glad to be able to point to several grounds of encouragement, which cannot but advance the interest of Local Taxation Reformers in the coming session. The importance of the subject is much more generally admitted, the state of public opinion and information with regard to it very much advanced, and very considerable has been the progress of the question even since the corresponding period of last year, when the committee were enabled to congratulate the Council on the success of the earlier agitation. The continued success of the Metropolitan Poor-Rate League, now including twenty-two London parishes in its organisation, proves that the question is far from being a purely agricultural grievance. The sustained interest and increased earnestness of householders is evidenced by the full attendance at all the numerous meetings of this body in Islington, St. Pancras, Marylebone, Plumstead, Woolwich, and many other parts of the metropolis. The secretary of your committee had recently an opportunity of addressing the Chamber of Agriculture at Hungerford, and the course followed by that Chamber of appointing a local sub-committee to diffuse information and collect subscriptions, is commended to the notice of those districts where a local organisation of this nature is not already in existence. Your committee are gratified to observe that the recent unauthorised disallowances by the Treasury of the costs of criminal prosecutions have been considered by a very large number of courts of quarter sessions, and the vigorous action taken in different counties must help to convince the Government of the feelings of the ratepayers with regard to our anomalous system of local taxation. The decision of the case which the magistrates of Lancashire raised in the Court of Queen's Bench on the 29th of January last was, in fact, a moral victory, and fully confirmed the opinions your committee expressed as to the illegal and unwarrantable conduct of the Treasury officials. The Lord Chief Justice and the Bench unanimously held that the Lords of the Treasury had exceeded their powers, and although the court was unable to compel their lordships to refund the sums in question, it was indicated by the bench that a remedy, which Parliament alone could afford, was urgently required for a state of matters which was described as a "crippling of justice" and "a monstrous and scandalous" anomaly. A return showing the amounts disallowed in boroughs has just been issued, which shows that towns have suffered more heavily even than counties, fully more than 10½ per cent. of the cost of prosecutions in boroughs having been disallowed in the past six years. Your committee are now issuing copies of this return with a circular to town clerks calling their attention to these facts, and asking the co-operation of their Councils in bringing the matter before the Legislature by petition. In turning to the future it seems to your committee that the hands of Local Taxation Reformers would be materially strengthened if a return of all local taxation were laid annually before Parliament at or before the time when the Chancellor of Exchequer makes his financial statement. Chiefly, however, at this juncture your committee would urge on this Council, and on all their supporters, the necessity of continued and mitred resistance to new charges on the local rates, until Parliament has recognised the grievance of the ratepayers by extending the incidence of rating to persons and property now exempt, or by removing imperial charges from the category of local taxes. They would especially point to such objects as militia, lunatic asylums, police, and the admin-

istration of justice, as so essentially matters of imperia necessity, and so very largely controlled by imperial authorities that their transference from the local rates to the Treasury would seem to be an act of justice which cannot be much longer delayed. The return moved for by the chairman of your committee, showing the total expenditure and the amount of the Government subvention under each of these heads, which was alluded to in your committee's November report, has only just been issued. It, however, gives only the amount expended for such purposes in counties, and (contrary to the original intention) does not give this for cities and boroughs as well, and it has become the duty of the chairman to ask for this additional information. As soon as this further return is published your committee trust they will be in the possession of the fullest and most reliable data obtainable with regard to this special portion of their general subject. In indicating certain specific charges your committee in no way depart from their repeated declaration of the national character of other yet larger and heavier local burdens. They cannot, however, omit to point out to ratepayers which of the abuses of our local system of taxation are most readily assailable, and in what directions the prospect is most open to any instalments of the justice which they claim. Your committee recommend, therefore, the concentration in the first instance of the efforts of Local Taxation Reformers on individual charges, and trust that this course, which is suggested by them after mature consideration, will be assented to as being the best policy for insuring the approval of the House of Commons, and most likely to effect an early reduction of ratepayers' burdens. They solicit, therefore, your cordial co-operation in the more definite line of action they have ventured to recommend, and they confidently appeal for personal assistance, and for pecuniary support to all ratepayers, as well as to the Chambers of Agriculture who have up to this time so warmly and unitedly aided them in fighting, *not* the battle of the country against the towns, as has most erroneously been urged, but the battle of the owners and occupiers of all houses and lands against the manifest injustice of exceptional taxation. So anxious is the chairman of your committee that this movement should not lack the material assistance which will doubtless be required to give it a fair prospect of success, that, provided a sum of £2,000 be contributed within the next three months by owners of land and houses in amounts of £100 or £50, he will be prepared to double his present subscription of £100 in order to further the objects the committee have in view. Your committee have to acknowledge with thanks the subscriptions received since their last report.—Massey Lopes, Chairman.

Sir M. H. BEACH proposed: "That this Council, in receiving, approving, and adopting the Report, urges every associated Chamber to strenuously support the policy and course of action indicated in the Report."

Mr. A. STARTIN (Warwickshire), in seconding the motion, agreed that they ought to attack this gigantic fortress in its most vulnerable points, and that to attack details was not a retrograde step. He expressed a hope that, if there were a surplus income this year, the Government, instead of surrendering the house-tax, would be willing to make grants in aid to Boards of Guardians, to the extent of placing upon imperial taxation one-half the charge for indoor relief. Such a measure would be a considerable relief to the ratepayers, and prove a great public advantage in the administration of the poor-law.

The Report was adopted.

Mr. H. GENGE ANDREWS (Somersetshire) moved: "That in the opinion of this Council, many charges now paid from funds raised under the poor-rate assessment ought to be transferred to funds raised by imperial taxation, but that such transfer will not justify the continuance of the exemption from the poor-rate assessment of income arising from personal property."

Mr. C. M. CALDECOTT (Warwickshire) seconded the resolution. He said, referring to the disallowance by the Treasury of expenses which had been passed by the examining officers at assizes and quarter sessions, upon scales fixed

with the sanction of the Home Secretary and the Judges of Assize, that the excuse of the Treasury was that the charges in different counties varied, and that some of them were exceptionally high. It was true that there were considerable variances, and that sometimes the examining officers exercised a strong discretion; but unfortunately the County Treasurer had no power whatever to refuse anything that had been passed by the examining officers, and under the 14th Vict. cap. 55, sections 5 and 6, the Home Secretary was empowered to fix and regulate the charges for every county in England. If, therefore, there were exceptional charges in some counties, the Treasury should represent it to the Home Secretary, who would then call upon the counties to revise their scales of charges and settle them with his approval.

The Rev. Mr. PERRY (Staffordshire) supported the resolution. Mr. CORRANCE, M.P., approved of the resolution as indicating a more practical policy; and he was glad to observe that it was indorsed by one who held such a position as Sir Michael Beach. It encouraged the hope that gentlemen who sat on the front benches in the House of Commons were beginning to take a correct view of the question at issue. In his opinion they would best fight the battle in detail; at the same time that need be no bar to the assertion of the claims which they had hitherto advanced.

Mr. MUNTZ, alluding to the last paragraph in the report, complained that the funds subscribed were in no way commensurate with the work the Chamber had to do, and urged that, in order to show the country that they were in earnest, the landed and agricultural interest ought to give more substantial aid. With the view of setting the example, he was ready to commence the subscriptions by putting his name down for £100.

Mr. HODSOLL (West Kent) contended that the Chamber must not lose sight of the great principle with which they had started. The report in one of the paragraphs insisted on the necessity of continued and united resistance to new charges on the local rates until Parliament has recognized the grievance of the ratepayers by extending the incidence of rating to persons and property now exempt "or" by removing imperial charges from the category of local taxes. He objected to this word "or," for, in common with all old local-taxation reformers, he was anxious above all things that there should be no doubt about their object. Real property was, at this moment, paying 4s. in the pound in imperial and local rates, while all other descriptions of property were paying only 1s. 7d.; thus the basis on which they should stand in the House of Commons was so firm that there need be no dilution of their principles. A manly exposition, then, of the views on which they had started, was the best course that their friends in Parliament could adopt. What they wanted was justice, and thinking people would never be satisfied until the injustice of which they complained had been removed. He trusted, therefore, the Chamber would continue to adhere to its principles.

Mr. H. CLARK (Devon and Cornwall) would have been glad had the report gone further, and suggested that if the Government failed to bring forward in the present session a good practical measure, some influential member of Parliament connected with the Chamber should take the duty upon himself. The question would then be thoroughly ventilated, and the agricultural community would know what was their position, and who were, and who were not, their friends. Speaking from what he observed the sentiment entertained by the farmers of the two great western counties was one of general regret at the withdrawal of Mr. Goschen's proposal to divide local burdens equally between landlords and tenants.

Several members protested against these remarks, and denounced the Government proposal in strong and unqualified terms.

Sir G. JENKINSON, M.P., observed that the case of the agricultural community rested upon the Act of Elizabeth, whereupon

Mr. H. G. ANDREWS rose, and, whilst agreeing with the hon. baronet that the case did rest on that enactment, as proving its antiquity, declared that if the Elizabethan statute had never existed he claimed an Englishman's right to insist upon an equal distribution of burdens. The owner and the occupier were one in reference to these local taxes.

The resolution was put, and agreed to.

The next subject on the agenda-paper being the "Prevention of Contagious Diseases of Animals,"

Sir G. JENKINSON, M.P., then proposed the following resolution: (1) "That this Council having heard the reply of Mr. Gladstone to the second application made to him to receive a Deputation from the Chambers of Agriculture on the subject of the Contagious Diseases (Animals) Act, regrets that the Prime Minister still declines to receive such Deputation, as the subject is of vital importance to the agricultural interests. (2) That as the recent Orders of the Privy Council do not meet the requirements of the case, this Council adheres to the resolutions passed at its meeting in November, to the effect that the failure of the Contagious Diseases (Animals) Act has demonstrated the necessity for compulsory slaughter or sufficient quarantine of all imported foreign animals, and that the Government should make their present inspection of all cattle and sheep previous to embarkation in Ireland, and of all vessels engaged in conveying animals between Ireland and Great Britain as complete and effectual as possible." He regretted very much that the Prime Minister had seen fit to decline to receive an important deputation from the representatives of the Central and Local Chambers of Agriculture. He could quite believe that the right hon. gentleman had at that moment a great many irons in the fire, and possibly some of them would burn his fingers; but he did not consider that a sufficient reason for his refusing to hear the serious grievances of the agricultural classes connected with the contagious diseases of animals and the importation of foreign stock. They all knew that it was idle to expect any further assistance from the department to which they had been referred. Some months ago he himself wrote to that department as strong a letter as he well could write, and he received a very long voluminous answer, containing what appeared to him great inaccuracies and fallacies. He believed that the new regulations issued by the Privy Council last month had done no good, and the Prime Minister having twice refused to receive a deputation from that body, he thought it was now incumbent on them to repeat the resolution which they had passed before.

Mr. C. BRAMLEY (Lincolnshire), in seconding the resolution, said some time ago the agriculturists of his county took steps for carefully watching the importation of foreign cattle at the port of Grimsby, and after that had been done for several months they felt satisfied that it was totally impossible for any inspector to decide after only twelve hours' detention whether or not there were germs of disease in any of the stock that was imported. Such stock had travelled along the public roads, passed close to some of the largest farms in the county, and went by rail to different market towns, and he would ask them, as practical men, whether that must not cause the spread of contagious diseases among animals belonging to this country? There could be no doubt that the principal diseases had been imported, and it was high time that farmers had such protection for their stock as would meet the justice of the case. That was also for the interest of consumers, it being proved by statistics that the production of English meat had been largely diminished by the diseases introduced into this country by foreign stock. The Orders recently issued by the Privy Council might be a great improvement on the preceding ones, but they did not meet the radical evil. The foreigner was still allowed to bring his stock to England, apparently without any restriction, and when it had arrived it disseminated the germs of disease among English stock.

Mr. STRETTON (South Wilts) thought that by the last paragraph of the resolution the council gave its sanction to the principle of inspection; whereas he submitted that that was the chief cause of the mischief. Most practical men were agreed that inspection was entirely fallacious as regarded foot-and-mouth disease. An animal might pass the most competent inspector as being free from that disease, and within four days from that time the germs of disease might show themselves. [A MEMBER: "Four hours."] By retaining the latter part of the resolution, therefore, they would be supporting a system which had proved entirely fallacious. The farmers of the West of England had suffered greatly during the last six months from the importations at Bristol from Ireland. The local authorities of some counties had even petitioned the corporation of Bristol to close their market, but all they had done was to employ an inspector. At the late Smithfield meeting two inspectors reported against thirty-two animals, which were accordingly not admitted; but on the Wednesday and Thursday of the show he saw a number of

animals in the show who were suffering from foot-and-mouth disease, and that appeared to him a sufficient condemnation of the whole system of inspection (Hear, hear).

The CHAIRMAN observed that the objection of Mr. Stretton applied to the whole of the resolution, which was, in fact, a repetition of a resolution already passed.

Mr. STRETTON said he objected to the previous resolution on the same ground.

Mr. WHITTAKER (Worcestershire Chamber) thought it would be impossible to prevent importation from Ireland; and it was questionable whether England did not send disease to Ireland, as well as Ireland to England. All he wanted in that respect was to see the law enforced in Ireland as it was here.

The Rev. Mr. PERRY said Mr. Stretton seemed to assume that foot-and-mouth disease was the only disease to be dealt with, whereas, in fact, there were many others, and the resolution applied to all.

Mr. MASFEN (Staffordshire) concurred in the remark of the last speaker. Foot-and-mouth disease was no doubt a source of great loss and inconvenience, but it did not often cause death. A neighbour of his had lost 425 head of horned stock by disease in the last twenty-one years. Not five of them died from foot-and-mouth disease, and not one from rinderpest. The greater portion of them died from pleuropneumonia, and the tendency of Mr. Stretton's view was to leave that terrible disease to diffuse itself without any check.

Mr. C. S. READ, M.P., hoped that Mr. Stretton would not press his objection. He knew it was impossible to detect disease during incubation; but there was this great difference between Ireland and foreign countries—that pretty much the same laws were in force in Ireland as here, and diseases came under the eye of a Government official, whereas in the case of foreign countries they had no means of telling where diseases came from, and no power of enforcing inspection. They should not rely on inspection, but it was an additional precaution, and in some respects beneficial.

Mr. GENGE ANDREWS agreed with Mr. Stretton that the system of inspection was a rotten reed to rely upon, and believed the only security was to be found in a quarantine and slaughter at every place where foreign animals were imported.

Mr. FARMER (Peterborough) drew attention to the fact that when an animal in a herd at market was found to be diseased, all the inspector was bound to do was to impound that particular animal, while the others might afterwards spread the disease in twenty different directions.

Mr. YALLAND (West Gloucestershire) referred to a case in which a cow, purchased by him in Bristol market, spread disease among a herd of cattle, and caused a loss of £200. He hoped the Council would deal with that evil in such a way as to provide a remedy. He supposed they could not stop the importation of Irish cattle into this country ("No, no"), but farmers were suffering very greatly, and he did not think Mr. Gladstone could be aware of the extent of the mischief.

Mr. DANIEL LONG (Gloucestershire Chamber) contended that Government did not enforce a sufficient quarantine, and proposed an amendment to the effect, that a twelve hours' quarantine did not meet the requirements of the case.

Mr. W. LAWRENCE (Gloucestershire Chamber) seconded the amendment.

Mr. PAGET, M.P., considered it impracticable to enforce several days' quarantine in the case of Bristol, where sometimes from 1,500 to 2,000 head of stock were landed from steamers in a single day. Some gentlemen thought that quarantine should extend to a week.

Mr. STRETTON: I should say fourteen days.

Mr. PAGET would ask any practical man whether a fourteen days' quarantine would be practicable in the case of stock imported from Ireland. Let them recollect that it was possible to have a remedy that was worse than the disease. Irish stock was a necessity to the English farmer (Hear, hear), and, although inspection might not render importation harmless in the case of Ireland, if there were first a good inspection on the other side of the water, and secondly a good inspection when the cattle arrived here, that would be a great deal towards preventing the spread of disease.

Mr. C. WINKLE (West Gloucestershire) recommended the withdrawal of the amendment.

Sir G. JENKINSON, M.P., also recommended that course. He had, he said, on a previous occasion expressed the same view as that now expressed by Mr. Stretton; but he was

beaten; and he thought it became every Englishman to bow to the majority (cheers). He hoped the resolution would be passed unanimously.

Mr. D. LONG then withdrew his amendment, and the resolution was carried.

The next subject appointed for consideration was the Malt-tax.

Mr. H. NELLID moved the following resolution: "That, in the opinion of this Council, the agricultural interest is entitled to relief in the matter of the Malt-tax, either by repeal or by commutation, as may appear most advisable to the Chancellor of the Exchequer." In 1854, the great apostle of free trade, as he was called, Mr. Cobden, said: "We owe the farmers something, and we will endeavour to pay them in kind. It had often occurred to me to compare the case of the British agriculturist who, after raising a bushel of barley, is compelled to pay a tax of 60 per cent., and is prohibited from converting it into a beverage for his own consumption, with what I have seen in foreign countries; and I really can call to mind nothing so hard and nothing so unreasonable. I am quite sure that the cultivators of the vine and the olive in France and Italy would never tolerate such an impost." That was the opinion of Mr. Cobden. They learnt from unquestionable data that nothing was more valuable for the feeding of dairy stock and the securing of dairy produce than malt. Earl Russell, while he was Lord John Russell, once said, that if he were Prime Minister when protection to agriculture was abolished, the first thing he would repeal was the Malt-tax.

Mr. T. ARKELL (Swindon), in seconding the resolution, said he wished to treat the question not as a consumer of beer, but as a farmer who produced stock, and he contended that malt ought not to be mixed up with the revenue, like beer, wine, and spirits. Farmers could not feed their sheep on meal because the meal might be blown away, while as regarded the sprouting of grain what they wanted was, perhaps, to wear a couple of bushels at a time, and not several quarters. If oilcake had to be used in the wholesale sort of way in which it was assumed that malt might be, such a state of things would not be at all satisfactory. Nothing could compete with oilcake for feeding purposes so well as malt. Now grain might be given to pigs without filling them, but if it were given to young sheep their digestive organs would not stand it. Malt was, as they all knew, assimilated much better than grain, and the mere putting of water to it brought out a sweet wort which all animals, except the tectotallers, liked. Nothing was more likely to benefit the consumer and lead to abundance than the power of manufacturing cheaply, and there could not be a greater restriction on the farmers' business than the malt tax.

Mr. STORER (Nottinghamshire Chamber), observed that in the rearing of lambs nothing could be more useful than malt, and he believed that if malt were free 50 per cent. of the losses by death might be avoided—a point which was surely well worth the consideration of the consumer. In a letter to himself Mr. Cobden admitted that in their agitation on that question farmers had justice on their side, and said the matter rested with the county members, who were not sufficiently strenuous in urging the necessity of repeal on the Government. He (Mr. Storer) hoped the county members would now show that they really had some feeling on that question. He came from a large barley-growing and malt-consuming county, and he knew many farms in clay districts which produced barley that was not adapted for making Burton pale ale, but would be most useful in feeding animals on the farm. Many of the labourers there felt very strongly on the subject. In many parts of his county the brewers' beer was so bad that harvest labourers had determined not to take such filthy stuff. As to the statement that labourers could not brew at their own homes, he knew it to be incorrect. He gave his own men five strikes a year each now for home-brewing, and had promised that if the Malt-tax were repealed he would increase the quantity to eight strikes. At present beer cost men who brewed at home with purchased malt 9d. per gallon. If the tax were taken off there would of course be a considerable reduction of cost, and he believed that in the repeal of the Malt-tax would be found to a great extent the solution of the dillicent question of drunkenness.

Mr. STURKIN could not help remarking that the Chancellor of the Exchequer received the deputation with the greatest courtesy, and said that if he knew how to deal with the small

brewers and the revenue could be sufficiently protected he would be happy to transfer the tax to beer. That would, however, be such a gigantic change that perhaps even Mr. Lowe would be unable to move the *vis inertiae* of the Excise department.

Mr. TURNER (West Kent) had been in the habit of attending and taking part in discussions on the subject for the last twenty years; he had also accompanied many a deputation to Chancellors of the Exchequer respecting it, and seen a good deal of politeness, and heard kind words, but all ended in nothing. The case of the farmers was this, they had constantly agitated, and complained bitterly, and they had been told that their claim was equitable, and that they were entitled to relief; then they were bowed out with the assurance that what they asked was an impossibility, for "seven millions of money is a sum that we cannot possibly spare." If they continued their agitation, he believed they would be successful in the end, it would be as hopeless as ever to go on as they had hitherto done, for they would be bowed out as before on the score of impossibility. According to the old fable the bundle of sticks could not be broken so long as they were united; and the malt duty he likened to a bundle of sticks. What ought to be done then, was to make a beginning. They must try if they could not loosen the bundle, by getting out a stick, when the whole would soon fall to pieces. Commutation or repeal was what they asked for, and if they could but get a million off the tax it would be a good beginning. Total repeal of the tax he demanded in the interest of the agricultural labourers, a class of men whose physical strength was being rapidly deteriorated by the noxious and infernal beverages which they had to drink. He denied that it was impossible for labourers to brew their own beer, and stated that he had two men in his service who had brewed their own beer for the last two or three years, and that they were the best men he had, and could do the most labour. Let an attempt, then, be made to divide the bundle of sticks, and they would eventually be broken.

Mr. H. BIDDELL (Suffolk) reminded the Chamber that two years ago they sent a deputation to the Chancellor of the Exchequer, and that the following year they wrote to him, but whether the reply of Mr. Lowe was satisfactory he left them to say. This year their business committee recommended the adoption of the motion now before them, and that he supposed was to conclude what the Chamber was expected to do. If so he did not hesitate to tell them that they were never likely to remove the duty from malt or beer. They were told by the Chancellor of the Exchequer that repeal was impossible, and with that opinion, looking at the present state of political parties, he (Mr. Biddell) was inclined to concur. Against commutation the right hon. gentleman admitted that he had no argument. The only difficulty was this, said he, we can get at the public but not at the private brewer. Now was it to be believed that the Chancellor, who knew the income of every gentleman present, and how many servants, horses, carriages, and dogs he kept, could not ascertain that? Why, it was a simple begging of the question altogether, and the fact was, that the question had been shifted and never met. The Chamber might rely upon it that they must do something more than merely pass resolutions like the present once a year if the movement was ever to be successful. He only wished that the question of the Malt-tax had pressed upon public attention during the last three years with the same amount of sagacity and perseverance as had been displayed on the question of local taxation. If it had been taken up in the same spirit and handled in the same way no Chancellor of the Exchequer would ever dare to tell them that the repeal of the malt duty was impossible.

Mr. READ, M.P.: If they contented themselves with passing such resolutions only, they might just as well let the subject alone. This year he understood that the Chancellor of the Exchequer would have a large surplus revenue at his disposal, and malt-tax repealers hoped to have a slice out of it. They had never wished to tax other people, in order to get rid of this impost, but had always said, whenever there was a surplus, that the farming interest and the consumers of beer had a right to have their claims fairly considered by the Chancellor of the Exchequer. The right hon. gentleman had said, "Don't imagine that I should look on the reduction of the malt-tax unfavourably; on the contrary, I should be glad to have it in my power to effect it." Well, it would now be in his

power to do so. Let the Chamber, therefore, call upon him to do it. But the question must be taken into the House of Commons, and the Chancellor of the Exchequer baited until he consented to do something for relief.

Mr. BROWNE (Norfolk) did not regard the resolution with warm approval, because it was confined to the relief of the agricultural interests. They also wanted to convince the Chancellor of the Exchequer that the advantage would be shared in by the Kingdom at large, and would not be enjoyed exclusively by one individual interest. More might be made of the subject of malt being useful as food for cattle. As a breeder, and not an unsuccessful breeder, of sheep, he knew of nothing more beneficial to ewes in the fattening of his stock than malt, and if it could be shown to the Chancellor of the Exchequer that if malt could be used at the discretion of the farmer, the cost of all fattening materials would be reduced, and with that the cost of producing meat, which could then be sold cheaper, such an agreement would have more influence with the Minister and with public opinion than any begging petitions on the part of the farming interest.

Mr. ANDREWS concurred in the views enunciated by Mr. Biddell. The question he said did not rest with Mr. Gladstone, but with a majority of the House of Commons; for without a majority of the House at his back, he could not resist the demand. He was strongly of opinion that if the members of the House of Commons connected with or interested in the land were united on the question, they would have no difficulty in carrying it whenever they pleased. But, unfortunately, the great body of agricultural representatives were divided into two parties, who were always engaged in a struggle for office, and took the course they did in order to secure the support of the commercial and manufacturing interests. The only resolution which the Chamber could pass was such as they hoped and believed would exercise an influence upon the representatives with whom they were connected.

Eventually the resolution was put and adopted; and, on the motion of Mr. T. WILLSON, seconded by Mr. COOPER (West Riding), it was agreed that a copy of the resolution should be forwarded to the Chancellor of the Exchequer, and that Colonel Bartlett, M.P., be requested to bring on the subject of the malt-tax on an early day before the House of Commons.

The Chamber then adjourned.

On Wednesday the Chamber re-assembled, and held its first general meeting under the new code and rules when Mr. E. Heneage was re-elected Chairman, and Sir M. H. Beach, M.P., vice-chairman for the current year. The treasurer and secretary were also re-appointed, and Mr. G. F. Muntz was chosen to fill the vacant seat at the council.

The Chamber next proceeded to settle the bye-laws, amongst which was one which provides that the Council shall annually appoint at its first meeting five of its members, who are also members of the Legislature, together with the Chairman and Vice-chairman, to be a Parliamentary committee, of whom not less than three shall be a quorum, to advise the Council of the introduction or progress of measures in either House of Parliament. Whilst the Chamber was engaged in selecting this committee, Sir M. H. Beach observed that amongst the names mentioned there was only one—namely, Col. Tomline, who sat on the Government side in the House of Commons, and that it was of the highest importance not to make this committee one of a party character. He suggested, therefore, that they should place upon it some members connected with the Liberal party. This being a difficult task, for, as one of the speakers observed, liberal members were generally opposed to the Chamber, it was at length resolved to appoint the following gentlemen as a provisional committee, to hold office until the next meeting in March: Mr. C. S. Read, Sir M. Lopes, Colonel Tomline, Mr. Pell, and Sir G. Jenkinson, together with the Chairman and Vice-Chairman.

The election of the business committee followed, and resulted in the choice of the Chamber falling upon Mr. Muntz (who had 67 votes), Mr. G. Whitaker (61), Sir M. Lopes (61), Mr. Hodson (59), Mr. Biddell (55), Mr. Andrews (46), Mr. Masfen (44).

The subjects fixed for consideration at the March meeting of the Council are Sanitary Legislation, and Turnpike Trusts and Highways. This concluded the proceedings.

ROYAL AGRICULTURAL SOCIETY OF IRELAND.

At the monthly meeting of the Council, in Upper Sackville-street, Dublin, Sir George Hodson, Bart., in the chair,

Mr. DONNELLY, C.B., brought forward a motion of which he had given notice, as follows: "That all persons occupying land who may hereafter be awarded a prize from this Society for green crop, horse, cattle, sheep, or pig shall be required, either by themselves, their agent, or steward, to subscribe the following declaration: "I hereby declare that the lands of

are kept in a husbandlike manner, and generally free from all weeds such as may injure the occupiers of adjoining lands." This, he remarked, was not a new subject, inasmuch as at the half-yearly meeting of the Society, held on the 18th of December, 1856, his Grace the Duke of Leinster in the chair the accompanying resolution was adopted—That the Society, takes this opportunity of expressing its entire approval of the exertions of the Registrar-General in calling public attention to the importance of the destruction of weeds on the tillage and pasture-lands of this country, and the Society trusts that the local farming societies will, as far as practicable, use every exertion, by annexing suitable conditions as to clearing of lands from weeds, in the distribution of their premiums, in order to accomplish this important object." It might also be in the recollection, he said, of several members of the Council that about ten or twelve years ago he again brought the same subject before the Council, when a desire was expressed that, as there was a growing feeling in favour of the object of his motion, he ought to postpone it to some future period. He did so, but it must be admitted that little improvement had taken place in this respect throughout the country generally. He had received the subjoined letter from the Secretary of the North-East Agricultural Association:

The North-East Agricultural Association of Ireland, Ulster-buildings, Waring-street, Belfast, 22nd January, 1872.—Dear Sir,—I brought before the annual meeting of this association, on Friday last, the subject of the motion which you intend to make at the next meeting of the Council of the Royal Agricultural Society, with the view of extinguishing "weeds," and although it is not usual at our annual meetings to enter upon the consideration of any subjects but those enumerated in the report of the committee, I may mention that your "notice of motion" met with the general approval of the meeting.—Yours faithfully, G. GERALD BINGHAM, Sec.

As the next exhibition of the Society was to be held in Belfast, some distribution of the prizes offered should be made in order to secure the desirable end in view, which had met the approval of persons of influence and authority.

Mr. OWEN observed that no member of the Council would venture to say that the object which was sought to be attained by Mr. Donnelly was not a most excellent one and a step in the right direction, but the winners of prizes for turnips and Shorthorns were generally persons who would come under the control of such a resolution. It would be very difficult for the governors of a local society to ascertain what was the exact state of the land as regards weeds that would qualify them to a prize. However, he had no doubt that it would be useful if the matter got ventilated.

The Rev. Mr. BAGOT said the question was a most difficult one, and he was afraid that in its present form it would be difficult to attain what Mr. Donnelly sought, inasmuch as his experience of local societies was that parties would sign any declaration that would be set before them. If the thing could be accomplished in any other way he would give it his support.

Mr. WADE conceived that the resolution in its present form would be perfectly innocuous.

Alderman PURDON, while approving of the object which Mr. Donnelly had in view, suggested that it might be better to postpone its consideration, to enable it to be brought forward in a shape that would meet the approbation of the council.

Mr. DONNELLY said as there was a general concurrence of opinion on the importance of the subject, the only thing being as to how it could be best attained, he did not think it would

be becoming in him to press his motion. Much benefit had followed from previous action in this matter, from the course pursued by various grand juries and other public bodies. He had received a number of letters from road contractors complaining of the injustice done them by farmers, who by allowing weeds to grow on the adjoining lands, had created filth and dirt along the ditches bounding the public highways. In withdrawing his motion, he hoped to be enabled to bring the matter forward in a more satisfactory manner at the next meeting of the council.

Mr. BAGOT submitted the report of the committee on the recent exhibition of traction engines and double-furrow ploughs, as follows: *Double Furrow Ploughs*.—At their first meeting your committee decided not to take duplicate entries of the same plough; so this had the effect of limiting the number of entries, which only amounted to four; but as these comprised those from leading makers of the United Kingdom, the exhibition answered the expectations of your committee. The manufacturers who exhibited were: Messrs. John Fowler and Co., Leeds; Ransomes, Sims, and Head, Ipswich; R. Hornsby and Sons, Grantham; Mellard and Co., Rugeley. As this was only an exhibition, not a competition, your committee do not enter into the particular merits of each plough, but must express their admiration at the excellence of the work performed by each, excepting the last on the list which arrived on the field too late for trial. No single plough could pack the work and form as good a seed bed as any of the three first on our list. Notwithstanding a very inclement day, hundreds of farmers visited the field, and numerous orders were given for ploughs. One novelty in single ploughs was exhibited by Mr. Robertson, of 22, Mary-street, at work: a wheel plough, which, instead of a fixed mould-board, had a concave disc on an axle, which revolved by friction as it passed through the ground, thereby smashing up the furrow, and acting as a grubber as well as plough. The work of this plough was greatly admired, but most farmers said they thought it more suitable for stubble and broken ground than lea. As mentioned above, a double-furrow plough, on the same principle, came too late to the field to be tried. Your committee hope the society will have an annual exhibition of ploughs at work, and think much good would be done if an annual exhibition could be arranged in each of the four provinces. They regret no Irish-made plough put in an appearance. *Traction Engines*.—There were three entries of traction engines, all manufactured by Messrs. John Fowler and Co., of Leeds—a 12 h.p., 8 h.p., and 6 h.p. The first day these engines carried 30 tons to Lyons, a distance of 15 miles from Dublin. They were six hours performing the journey, which includes all stoppages for water, &c. On the second day the engines were employed conveying parties to and from Maynooth and Straffan station to the ploughing field. There was about 100 passengers taken from Straffan to the field, 2½ miles in 33 minutes; about 70 from Maynooth, 3½ miles in 52 minutes. By the kind permission of the Commissioners of Public Works, and through the instrumentality of Mr. McDonald, of the Phoenix Park, who gave every facility to your committee, the engines were severally tested in the Phoenix Park on the third day, in the presence of his Excellency the Lord Lieutenant, the Commissioners of Public Works, and several other gentlemen, and your committee append the report of Mr. John Bailey, C.E., who was requested by them to make it, so that the Society might have before them an authoritative statement of the work these engines can perform.

Blackhall-place Iron Works, 24th Jan., 1872.

Gentlemen,—In accordance with your desire, I attended the trial of Messrs. John Fowler and Co.'s traction engines, which took place last week in the Phoenix Park, and beg to report as follows: On Friday, the 19th inst., there were three engines at work—one six, one eight, and one twelve-horse power, nominal. The twelve-horse power engine is fitted with a single cylinder, steam jacketed, 10½ inches diameter by 12-inch stroke; the boiler is of the locomotive type, having heating surface, of the fire box 50.5 square feet, and of the tubes,

120.6 square feet. Total heating surface, 171.1 square feet; fire grate, area 7.5 square feet. The driving wheels are of wrought iron, 5 ft. 10 in. in diameter, by 18 in. wide. All the spur and differential gear is of cast steel and of ample strength. The weight of this engine when in working trim is 11 tons, having on board 12 cwt. of coal and 320 gallons of water. When testing this engine on Saturday, the 20th inst., I found her consumption of coal, "Burnback," was 3.9 per ton per mile of gross load, engine included. I was unable to secure a trustworthy indicator diagram, owing to the breaking down of the indicator; I, therefore, cannot give the actual horse power exerted. The consumption of water per ton per mile did not exceed $2\frac{1}{2}$ gallons, but the exact quantity I could not ascertain, owing to the want of some standard measure. I attribute the rather heavy consumption of coal to the very bad state of the road, owing to a frost breaking up at the time and clogging the wheels to the thickness of an inch or more. Steam varied from 110 to 120 lbs. on the square inch and the revolution of the engine averaged 170 per minute, giving a mean speed of three miles per hour, with a gross load of 33 tons, exclusive of the engine, consisting of 4 waggons 3 tons each, and 21 tons of ballast. Had we gone half speed, or $1\frac{1}{2}$ miles per hour, we could have hauled a much heavier load; as it was, we ascended an incline of about 1 in 15 with the greatest ease at $1\frac{1}{2}$ speed. The eight and six-horse power engines are constructed each after the same patterns and proportion to the twelve-horse power engine and boiler, and in my judgment did their work with equal success, the eight-horse power engine taking, on Friday, the 19th instant, round the same course as the twelve-horse power engine, a useful load of $14\frac{1}{2}$ tons, and a dead load of 9 tons, making a total of

$23\frac{1}{2}$ tons, exclusive of the engine, which weighed 9 tons, speed averaging $2\frac{1}{2}$ miles per hour. In conclusion, I may remark that I consider the trials of Friday and Saturday, the 19th and 20th inst., on the whole most satisfactory, the speed being fairly maintained throughout, and the accuracy and ease with which they could be handled amply illustrated when the twelve-horse power engine and two loaded waggons were taken round the acute angle and steep incline leading from the main road to the ballast pit, when the differential gear came beautifully into play. These engines appear cheap for the amount of work in them, especially the eight-horse power engine, the price of which is £100, but £220 extra seems a long price to pay for the advantage of india-rubber tyres.

JOHN BAILEY, M.I.C.E.

A vote of thanks having been passed to the committee, the report was ordered to be inserted on the minutes, and published in the annual proceedings of the Society.

The CHAIRMAN intimated that he had received a communication from Mr. Alexander Wood, addressed from Paddington, who appeared to be connected with one of the great English lines of railway, calling attention to the necessity of providing a rapid means of transit for dead stock to the London market, and pointing out the means and resources of the company with which he was identified in effecting this object. Mr. Woods suggested that if the proposition were approved of by the Council, a gentleman would wait on the members, at their next meeting, and afford them every information on the subject.

After considerable discussion as to the feasibility of the project, it was agreed to invite the attendance of the gentleman referred to on the next monthly meeting of the Council.

SMITHFIELD CLUB.

COUNCIL MEETING, February 6, 1872.—Present: Lord Tredegar, President, in the chair; Earl of Powis, Vice-president; J. D. Allen, J. N. Beasley, Joseph Druce, Samuel Druce, Walter Farthing, Brandreth Gibbs (hon. secretary), John Giblett, Thomas Horley, jun., R. Hornsby, Robert Leeds, E. W. Moore, R. J. Newton, James Quartly, William Rigden, William Sanday, T. L. Senior, C. Stephenson, Joseph Stratton, William Torr, H. Trethewey, J. S. Turner, H. Webb, Jacob Wilson.

The minutes of the last Council meeting were read and confirmed.

The report of the stewards on animal No. 215, exhibited at the late Show was read, when it was unanimously resolved: "That the Council considers Mr. Warner Coleman, farmer and dealer, of Hackford, near Wymondham, to be highly blameable, in having filled up and signed the Breeder's Certificate, without the breeder's authority, and that no certificate signed by him be received in future."

A letter was read from the Earl of Darley, relative to an animal excluded from the Show, in consequence of the veterinary surgeons of the Show having reported that it was affected with foot-and-mouth disease, and the Council directed a copy of Professor Simond's report on the same to be communicated to his lordship.

The Report of the Judges, who decided on the merits of the instruments exhibited for the Earl of Powis Prize for the best instrument to supersede the use of the pole-axe in the slaughter of cattle, was read. The prize being withheld, it was resolved to accept the offer of the Earl of Powis to renew the Prize this year.

It was resolved to defer the consideration of the two following subjects:

1st. Whether animals exhibited elsewhere within a limited period before the date of the Club Show should or should not be admitted in future, during the prevalence of the foot-and-mouth disease.

2nd. Whether any, and if so, what modifications shall be sought to be obtained from the Privy Council in reference to the regulations affecting the foot-and-mouth disease generally.

And it was resolved that if the President and Stewards shall consider it expedient, a Special Council Meeting shall be called by the President at such time as he and the Stewards shall

consider necessary, previous to the 1st November next; and that if no such meeting be called, the matter shall remain as heretofore.

Mr. Henry Webb, of Streetby Hall, West Wickham, Cambridge, and Mr. William Fookes, of Tarrant Monkton, Blandford, were unanimously elected Stewards of Live Stock for the ensuing three years.

Mr. Joseph Druce and Mr. Robert Leeds were unanimously re-elected Stewards of Implements for the present year.

The following additions and alterations were made in the prize sheet for the next show: A new class for Sussex steers not exceeding 2 years 6 months old—first prize, £20; second prize, £10. The other classes of steers to be as follows—not exceeding 3 years and 3 months, and above 3 years and 3 months; and a third prize of £5 was added in the Sussex heifer class, and also in the Sussex cow class.

It was resolved to omit the word "West" in the division for West Highland cattle; also, to abolish the class for "light-weight" Leicester sheep.

Also to abolish the class for the old sheep in the Oxfordshire breed.

Also to increase the first prize for Ryeland, Cheviots, Dorsets, &c., to £20.

Also to increase the prize in extra stock, viz., for steers or oxen to £20, for heifers or cows to £20.

It was resolved: That any animal that has once won the Champion Plate shall not compete for it again.

It was resolved: That in the classes for ewes in the different divisions, the restrictions making it compulsory for them to have had lambs be abolished.

Also that there be a second prize of £5 in each of the classes for ewes.

Letters were laid before the meeting, and answers directed to be sent thereto in accordance with the decision of the Council in the respective cases.

The following were elected members of the Club: Francis Sherborn, of Bedford, Hounslow; Earl of Feversham, of Duncombe Park, Hensley, Yorks; R. H. S. Vyryan, of Trewan, St. Columb, Cornwall.

The thanks of the meeting were voted to Lord Tredegar, president, for his lordship's conduct in the chair.

THE AYRSHIRE FARMERS' CLUB.

At the quarterly meeting, Mr. Brown Ardnicl, President of the Club, in the chair, Mr. THOMAS BONE, East Sanquhar, St. Quivox, read the following paper on The feeding of cattle and sheep.

When at our last quarterly meeting I was asked to read a paper on the feeding of cattle and sheep, having only fed cattle for a short time, I could only consent on the ground that it is the duty of every member of this large and growing club to do all in his power to further the interests of every branch of agriculture; and surely there is nothing so much deserves the attention of the farmer at the present time, when the price of beef and mutton is so high, as the regular and steady progress of the feeding stock on the farm. Although I am quite unable to bring out anything new on the subject, this end may be gained should the few hints made be the means of provoking a good discussion on this very important subject before this meeting of cattle and sheep feeders; and as the most likely way of doing so is to give our own experience, there is little doubt that we may all be benefited by the interchange of opinion which it is to be hoped will follow. Before alluding to the feeding of cattle, there is another and perhaps quite as important an element to profitable feeding to be considered, viz.: The selection of the cattle to be fed. The first question here seems to be—What kind of cattle are found most profitable to feed? or in other words, which of our breeds or cross breeds of cattle give the largest return of beef for a given quantity of food consumed? As this, however, would open up too large a field of discussion, we will confine our remarks to the kinds of cattle generally fed in Ayrshire. The Shorthorns, from their quiet docile nature and their producing qualities, are perhaps most in favour, and justly so, as no kind of cattle will give the same return for good keep if of fine form and quality, whether fed in boxes or tied up, if kept warm, dry, and comfortable. The cross between the Shorthorn bull and Ayrshire cow, is a hardier, though not quite such a heavy animal, and is most deservedly a favourite with us for feeding purposes, being more suitable for our cold climate than pure Shorthorns, and found to be useful and capital feeders, often paying better than larger cattle. The pure Ayrshire breed, although not capable of feeding to so great a weight, or coming so soon to maturity, are very neat, useful cattle for the butcher, and in our local markets, especially in the spring and summer months, sell at the highest price by the cwt. to those not doing a large trade in beef. The most of our Ayrshire cows, when either old or otherwise unfit for the dairy, are turned in to fatten, and though not first-class beef, supply an excellent second or third-rate article, according to age and quality. The Galloway breed are also found to be useful feeders when kept till well matured and ripened for the butcher, although they are generally considered not to come so early forward for the shambles as most other breeds. The Irish crosses are very greatly improved within the last few years, which is accounted for by the introduction of the Shorthorned bull, and perhaps by more attention being paid to the breeding cows also. We now find some of the best of them little inferior to our own home-bred cattle; still they are always the better of being grazed for some time in this country before being tied up, otherwise we often hear of the difficulty of getting them brought on to feed and of their losing a month or two at the start. There is another breed of cattle which our attention has been drawn to of late—I mean Herefords. Owing to the severe drought in England in the summer of 1870, considerable numbers of that breed were brought into this district; but they have not taken well with the butcher, although there is little doubt that in many cases they were hurried into the market before being properly fattened; consequently they neither paid the feeder nor the butcher well. The feeding of cattle as we find it practised in various parts of the country differs widely, and each system has its own advocates; still, there is a tendency to a more liberal scale of diet than used to be given, and our fat markets everywhere give evidence that increased skill and capital are brought to bear on the production of a first-class article. There has also been much discussion lately on the most economical system of

feeding. In such seasons as we have had lately, when both turnips and straw were scarce, and necessitated strict economy, many tried pulping and mixing of all their cattle food, and I have no doubt it is only where circumstances would not permit that it is not still carried on as the most profitable system. Not having the facilities for pulping, I have adopted the following plan, with little variation, further than gradually increasing the quantity of food given as we find the cattle come nearly ready for the market: We give three feeds a day of turnips sliced, with one feed of boiled meat about midday, and about 3lbs. oilcake, and 1½lbs. cottoncake after the evening meal of turnips, also straw or hay after each feed. The boiled meat has mixed into it as it is taken from the boiler about 3lbs. bean-meal and 1lb. barley-meal to each animal, the whole being stirred together and allowed to stand for three hours before being served out. The quantity given to each is regulated partly by its size, age, condition, and aptitude to fatten. Here I would strongly recommend the proper steeping of all meals before being given to cattle of any kind. I have already spoken of the proper selection of cattle for feeding purposes; but there is another point closely connected with that which I desire to allude to before leaving the subject, viz., that we feeders and breeders of stock often lose a great deal by allowing our calves, after getting milk for a considerable time and being brought into fine condition, to be turned out to grass without giving them either milk or cake, the consequence being that they lose their calf-flesh and the most of the next three months of their growth, and are very much reduced in value; indeed, no keep will afterwards make up fully for this loss. Too much care cannot be taken in the upbringing of young stock for feeding, by keeping them always in a progressive state, as they are less liable to disease than when checked in their growth. There are diversities of opinion in regard to the housing of cattle for feeding—some advocating the box system, others feeding in yards, others, again, keeping the animals tied in stalls. But, no doubt, where ample accommodation can be had, young cattle especially will grow faster and fatten quite as soon in boxes as under any other system—making more manure and of superior quality. The wants of our ever-growing population for animal food should induce farmers to turn their attention more to the production of mutton, for we find from statistics that twenty years ago there were little more in round numbers than 100,000 sheep annually imported into this country, while in the year just closed there were little less than 1,000,000, besides the enormous quantity of preserved mutton brought from our Australian and other colonies. Still, the demand for home-fed mutton is evident from the fact that we are now having one-half of our feeding sheep killed before they are eighteen months old; consequently, we are brought, as it were, to the very heels of the breeder. As my experience has been principally in the feeding of lambs, my remarks will be chiefly confined to that class of stock. One of the most important points to be aimed at is the proper selection of lambs for feeding. This is often one of the most difficult selections the farmer has to make, and is rendered more so by a practice generally followed in Ayrshire of the stock farmer selling all, or nearly all, his feeding lambs without any classification, such as tops, seconds, and thirds, or paleys, while in most other counties, especially in the south, they are so classified, thus enabling the farmer who wants a selected top lot for feeding off early to get exactly what he wants. The seconds suit the grazier also, who gets an evenly, though not such a strong, lot, but quite suitable for wintering on grass, then grazing the following summer, and often feeding off on turnips at the end of the season. The thirds, or paleys, find ready customers in farmers wintering only a few on dairy farms, getting the run of the whole farm, and are generally sold off in the spring to dealers, and grazed the following summer, and fed off on turnips at from twenty months to two years old. The question is often asked, What kinds of lambs are most profitable to feed or winter? Much depends on the situation, soil, and climate, and the pur-

pose for which they are intended—whether to be fed off early in the spring, or after being clipped and grazed through summer, &c. The first class of lambs generally kept for feeding we would notice is three-parts bred, namely, those bred from Yorkshire rams and half-bred ewes. Though not yet extensively fed in this county, they are well adapted for feeding on light, dry soils, with a little shelter and a good exposure, and, if receiving liberal keep, will be first ready for the fat market. They should not, however, be fed either at high altitudes or on stiff clay soils. The second class of lambs used for feeding are half-breds, namely, bred from Yorkshire rams and Cheviot ewes. They suit well for wintering on low, dry lands, and, when well-bred, give a good return for any extra feeding, coming up to heavy weights of mutton, with large fleeces, also, of valuable wool, and are ready for the fat market very soon after being clipped, or at about fourteen or fifteen months old. The next class are cross-bred or grey-faced, namely, bred from Yorkshire rams and black-faced ewes, and, when strong and well-bred, are hardy, good winterers, thriving better on the majority of farms in this county than any of the finer breeds, and, when eighteen months to two years old, are considered to be the best quality of mutton in the market, although they seldom come to the same weight as bred or half-bred sheep. The Cheviot and black-faced breeds are both very hardy and particularly useful on high, poor, or undrained land, and will thrive where no other breed will do well. They are generally wintered when lambs on foggage, the ewes being kept for stock and the wethers grazed until they are fed off at three or four years' old; the ewes of both classes being sold to be fattened when too old for breeding purposes. The feeding of the various breeds of lambs successfully requires a great deal of study and attention, as they are constantly exposed to the fluctuations and severity of our cold climate. The system I have adopted for a few years, and on which I last year wintered 170 lambs without a death and with comparatively few turnips, is the following: When buying lambs for feeding, I purchase a selected or top lot, although a little higher priced, and having procured a suitable lot, we have them dipped the first favourable day after being brought home. When either driven or trucked far they are turned out to a grass field not very rough for a week or so, as clover or other soft diet after wanting food for some time, is very apt to produce derangement of the bowels and some loss by death. They are then turned on to lay foggage, or a field of the best young pasture, and kept gradually improving until harvest is over, when they get the sown-out fields, care being always taken to have them changed often, so that the grass be kept clean. About the end of October there is often great difficulty in getting lambs to eat either grain or turnips, especially if the pasture at the time is fresh, and should a storm come they wander about the hedges, and lose condition very fast. To obviate this no trouble is too great. The best remedy I have found is to drive a few stobs into the ground, six or eight yards apart, and near the communication between two fields, tying a small sheaf of oats to each stob, and placing the feeding troughs very near, putting a small quantity of fine fresh oats into them every morning and renewing the sheaves for a few days, when generally one-half of the lambs will be taking a little, and nearly all the others soon follow. Any that are still not inclined to eat out of the troughs should be got about by the feeder while the others are eating and put into a fold, each one being taken and a little of the feeding used put into their mouths, which will seldom require to be done again. We use up our refuse wheat and barley with beans, Indian corn, and locust beans ground as fine as oatmeal and mixed in equal weight proportions; and in November, when coarse weather and frosty mornings begin, a little of the above is mixed with the oats along with a little best oilcake. After they have taken to eat it well, the quantity is increased, and a little cut clovery hay of best quality is also given, and increased until there is about as much bulk of cut hay as grain, which prevents the more ravenous eaters among the flock from getting too much grain; it also secures that they all have hay as well, and as a proof that they learn to get very fond of the mixture they will not eat clean oats after unless almost starving. Should the lambs be wanted off early for the fat market, we begin about the end of November to give twice a day as much as they will eat, and when a storm comes, they are more easily tided over when receiving a liberal supply in the troughs. About this time we

generally remove all our sheep to the lea fields that are to be ploughed in spring, placing their feeding-troughs on the driest and, if possible, the poorest spot in the field. The feeder should be careful that no more be given than they eat out before leaving the troughs, which at this time will not exceed half-a-pound per sheep per day, and should have the troughs upset and kept always dry and clean, or considerable waste will be the result. We find the most trying time on either sheep or lambs begins in the month of January or February, when cold, sterile weather or snowstorms set in; or even such an unprecedentedly wet, stormy time as we this winter have had, and which will be found to have reduced the condition of all classes of sheep considerably. To guard against this, we begin about this time to give turnips in the middle of the day, and increase the quantity as they are eaten out—they being at all times cut with the turnip stripper, to prevent injury to the lambs' mouths, especially when shedding their teeth. Where a flock of 150 lambs or upwards are to be fed chiefly on turnips which have been pulled and stored, I have never seen any plan of cutting turnips for sheep equal to the cart turnip-cutter made in Dumfries, which has two of Gardner's patent cylinders fitted on the axle, with a lever at the side to put the cylinders in or out of motion as may be required. With one of these carts, about eight cwt. of turnips can be lifted from where they are stored, and carted to the field where they are to be used—beginning at one side of the field, taking clean land every day until the whole field has been gone over, and in this way any diseased turnips, as well as the sheep droppings, are more equally distributed over the land. By this machine the turnips are cut or stripped into small pieces, as before alluded to, and delivered from it in three distinct rows, so that the sheep can pass between them and pick up the pieces in a clean state off the sward if care is taken to put the machine out of gear when any dirty or soft spot may come in the way. This practice, carefully followed out, will make first-class hogs early ready for the fat market, and I think more likely to pay than if kept on poorer fare until the end of the year; and, although we have only for profit the greatly enriched state of our pasture fields for the coming crops, there is little doubt we are amply compensated, and will be likely to continue the practice. The above treatment of lambs will not cost more than fourpence halfpenny a week up to January, but the increasing allowance until March will bring it up to about sixpence. The plan of eating off turnips where they grow with lambs, and allowing a quantity of them to stand in the ground till March or April, I do not think can be made profitable. When we see a lot of lambs puddling among turnips at the breaking up of frost, or even in soft weather, with not a clean place to lie down, or still worse when a severe frost comes, one half of them getting their mouths entirely spoiled, I am afraid it cannot be a profitable way of consuming turnips. There may be circumstances when it is almost a necessity for the sake of putting the land into order for sowing out. Still, if the turnips were taken up and stored at the proper time—the tops being left on the ground, and the difference of the value of the early lifted and those standing on to March and April, were given in the shape of bones to the land—it would be better for either corn or grass, and the sheep, getting the stored turnips, would be in far better condition.

The CHAIRMAN then called upon the members in succession to express their opinions on the paper.

Mr. R. M. CUNNINGHAM (Shields) said he had been very much pleased with Mr. Bone's paper. As a neighbour of Mr. Bone's, he was aware that he had been very successful in the feeding of lambs, and his remarks on that account were all the more to be valued. As had been observed in the paper, in the feeding both of cattle and sheep, success depended in a great measure on the selection of animals; and Mr. Bone had very properly pointed out that in this county they had not much choice, the custom having been hitherto, especially with lambs, to sell them without any classification. Of course, a few of the weakest were drawn out, but otherwise they were all mixed together. This made a lot of lambs very unequal, and they could not be fed so successfully as if they were all of nearly equal strength, for the strongest would always get more than their share, especially when fed in boxes. If this paper caused breeders to alter their system in this respect, one good end would have been served. In regard to feeding cattle, he

had been practising for some years the system of pulping turnips, and he thought where there was sufficient accommodation and other circumstances were favourable, that was perhaps the best system of feeding cattle. He only fed three times a day, and not four times—as Mr. Bone did—giving two meals of pulped turnips and one of raw, sliced. He might say in passing that this year he did feed some cattle four times a day. Probably large cattle that were wished to be early forward required four meals; and in addition to a quantity of oilcake and grain made into meal, he happened to have a quantity of carrots that were unfit for domestic use, and he gave them some of these, and found the cattle so thrive amazingly. His feeding stock he had reared himself, being a cross between the Shorthorn bull and Ayrshire cow. The first year he had been pretty successful; but the second and third years, even with the same bull and the same cows, he could not get the calves up to the same weight or symmetry. He would like to know if any of the members could give a reason for the falling off. Another thing he found, and which he thought would oblige him to give up the system, was that since he commenced crossing his cows he found great difficulty in getting them to settle; in consequence of which he had almost as good as lost some of his best cows for breeding purposes this season. Perhaps crossing had something to do with that. He had been feeding off these cattle at two years old, and last year on animals of 20 to 24 months old, he had almost £1 a month for them; but he despaired almost of ever bringing them up to the same money value again. He had been feeding in boxes; but he found the situation of the shed where the boxes were was too much exposed. There was too little heat for feeding cattle, though there might be plenty for wintering young cattle. If he was spared to continue in his present place, he would be inclined to erect another shed parallel to the present one, and cover them all in entirely, so that they would not be exposed to the cold frosty winds. With regards to lambs, he considered Mr. Bone's plan an improvement in some points on the plan he had been following, and he would be inclined to adopt it. There was one point on which he would say a little more than Mr. Bone. Speaking of shelter, he questioned whether it would not pay them, on low lands exposed to storms from the coast, to have moveable sheds made of iron, which they could move to different parts of their fields, in such weather as they had had during the last six weeks. His lambs seemed to him to be in a worse condition to-day than they were some weeks since, and yet they had been getting additional feeding, and as many turnips as they could eat, and hay—though he was sorry they had eaten very little hay, as owing to the open weather, there had always been a bite of young grass, and consequently they had been scouring more than he liked to see. They had been wet for days together without ever getting dry, and in that way he believed they lost more than would pay for iron sheds capable of being shifted about.

Mr. REID (Cluue) did not keep any lambs. He had a large dairy stock, and consumed the most of his green feeding with them. He, however, fed a lot of cattle in winter, and his system of feeding was to give turnips with straw after in the morning, beanmeal or bran at mid-day, and turnips and straw again in the evening. The dairy cows were fed much in the same way.

Mr. LEES (Carnigillan) said his experience had been more in the breeding of stock than in feeding. He strongly approved, however, of mixed kinds of food, and of giving different kinds of meal, as giving better results, and being much safer. In feeding young stock, it was an important thing to secure that their growth should be constant. Many Ayrshire farmers erred in this matter. To allow calves to suck their mothers was far better than anything they could give them. In his opinion the best thing to give calves after giving them milk for a certain period was linsced and beans mixed together; this was both nutritive and safe. Many farmers complained that feeding did not pay them; but the reason was that they fed their old cows, after they were done for any other thing. With regard to the circumstance mentioned by Mr. Cunningham, he did not think that crossing could have much to do with it: he rather thought it would be due to too high feeding. Crossing did well enough with sheep, and he could not see how it should not do as well with cows.

Mr. WALLACE (Braehead) had hitherto confined his attention chiefly to the dairy in connection with the town milk trade; but he had been very anxious to hear this discussion, opened

by a practical man like Mr. Bone. He had been in the habit of keeping a few sheep to pick up what was rough on the fields that was not taken up by the cows. They got no feeding, but they paid pretty well. Times were changing, however, and it might be necessary to consider whether, with the high prices of beef and mutton, it would not be more profitable to take to feeding than to continue to produce milk and butter. They were just getting the same price for a pint of sweet milk that they got 20 years ago, while bean meal had risen since then from 15s. to 26s. or 30s. per load, and Campbellow draft had doubled in price. There were other disadvantages with the milk trade, one of which was the Sabbath labour it involved in retailing it to the customers; and he had been debating in his mind for the last two or three years whether he should not give it up. Of course it was not wise to jump at conclusions in agriculture; but he had been diminishing his stock of dairy cows, and was inclined to adopt Mr. Bone's system.

Mr. ROBERTSON (Ryeburn) said he lived rather out of the feeding district. He liked the remark in the paper about the bringing up of calves. In his district, a number of years ago, they used to be very much troubled how to get their calves into proper condition to stand the winter. There was a sort of reason for that, for after they commenced to make cheese they did not give the calves as much milk as they needed. The last two years, when he took the milk from the calves, he gave them a little oilcake-meal, and sometimes a mixture of oilcake and peas-meal, with a pint of whey scalded, so that it did not scour them so readily. He gave them this for about two months after the milk was taken from them, and it made them stronger in the body and in better condition. When they were forward in condition in the month of December, he generally kept them in sheds during winter, as in this way they could eat their fodder far better. He generally gave them two fodderings of straw, and a foddering of hay, which helped to keep them in fresh condition. In spring they were in far better condition, and stronger all through, even when they came to be etterlings. He believed it was just the same in principle with cattle reared for feeding purposes. When treated kindly the first winter, he believed they would repay it as long as they were kept on the farm. He should like to get a little information as to the most profitable way of keeping dairy stock through the winter where there was no green crop. They had scarcely such a thing as a turnip in his district; and with 50 or 60 head of cattle, it was sometimes difficult to know what was the best way of keeping them through the winter. The plan he had adopted the last year or two was this: He began pretty early in winter with giving them a foddering of hay with a little bran, a little bean-meal, and a little Indian-meal. His experience in feeding milk-stock was that a mixture of feeding-meals was profitable. The only danger in being too good to them the first year was that when they went to grass in the spring, they were apt to take black-leg or inflammation. He had often found that the best winterers, and those in best condition, were the very ones most subject to disease; so that he preferred in bringing through young cattle, to give them more hay and less grain, than being too kind to them. He liked Mr. Bone's remarks about sheep very much. He thought a mixture of feeding was good both for sheep and cattle; but the sheep brought into his district were mostly Highland ewes, and he had never been successful in teaching Highland sheep off the Highland hills to eat anything but grass.

Mr. STEVENSON (Silverwood) had generally a few lambs in the end of the year, and he had been in the habit of giving them a little feeding during the winter. Where they were kept on till they were fat, they paid the farmer well enough, but if they had to be sold off in the end of April, he did not think they paid so well. The method of feeding, and the feeding stuffs recommended by Mr. Bone, were as good as anything he knew. With regard to the remarks of Mr. Cunningham about crossing, it occurred to him that he had heard before that the practice of crossing Ayrshire cows with Shorthorn bulls was apt to make the cows less serviceable for breeding purposes. He had always the idea that if cows were not in as good condition as they ought to be, they were less likely to be good breeders; but perhaps extremes either way would have the same effect.

Mr. WHYTE (East Raws) said the paper that had been read was a thoroughly practical one on a most interesting subject.

He liked Mr. Bone's remarks on the bringing up of young stock. He thought the practice was too general of stopping giving them feeding before they were able to feed themselves properly. He would go a little further than Mr. Robertson, who gave some feeding for two months. He thought it would be better to feed on during winter. He would approve of giving them oilcake. He used to be a good deal troubled with them taking black-leg, both in October and November and in spring; but since he commenced giving oilcake during winter, he had lost very few. If they got a lb. a-piece of oilcake per day they did very well. They very soon learned to eat it, and it was an economical way of wintering, as they did not take black-leg so readily. By continuing a lb. of oilcake a day, they would be bigger, and they would be got ready for milking purposes about two years old. He had had very little experience of sheep, but he found that if sheep were to pay at all, they would pay best with feeding. Though they might not get the profit on the sheep, if they managed to make their own, they had their profit in the improvement of the pastures.

The CHAIRMAN said he did not remember any paper the opinions in which had been less challenged than the one read that day. He was greatly pleased with Mr. Bone's remarks about the feeding of sheep. There could be no doubt that in weather such as this they would be much exhausted unless care was taken to keep them in condition. They had an advantage this season who had dry land and good shelter. He had no great experience himself in feeding sheep. He generally wintered about two hundred; but his farm was large, and they just got the run of the farm, and with that they did very well. But where a full stock was kept, no doubt Mr. Bone's plan was an excellent one. With regard to the rearing of young stock, there was a good deal of loss on calves owing to the greed of milk, which was often taken off them when their stomachs were not in a condition to take other food. His plan was not to give them warm milk, but milk with the cream taken off, with the addition of a little oilcake. He thought Mr. Bone was entitled to the warmest thanks of the Club for his very excellent paper.

Mr. YOUNG (Kilhenzie) said reference had been made in the discussion to pulping, and he thought to cut straw with

the pulp-cutter was the best and most economical way of using straw, as it made it go further, and there was less waste. He thought even the pulping of turriips should be more extensively done. He had known a good many stocks doing well with pulped turriips, without any cake. He followed Mr. Bone's mode of feeding cattle, but Mr. Bone's mode of feeding sheep was superior to his own. He remembered reading in Mr. M'Combie's book on cattle-feeding a statement that it would not pay him to give cake for more than six weeks or two months at the last. It struck him as something singular that, with such a system, he could turn out such fine cattle.

Mr. CUNNINGHAM (Shields) said the reason was, that Mr. M'Combie seldom sent a beast to market under four years old, by which time it was well filled up.

Mr. YOUNG said he was disposed to think they used too little oilcake in this county. Though it did not pay directly, it did indirectly, in the enhanced value of the manure.

Mr. CUNNINGHAM said with regard to losses from black-leg, he invariably put "setons" in the dew-laps of the calves in October, and he never lost a calf from black-leg.

Mr. BONE said he was not surprised that Mr. Robertson lost calves from the black-leg, after hearing the system he followed of giving them cut hay or straw. Had they been getting a little oilcake it would have soothed the bowels; but either cut straw or hay was sure to irritate them. He had known people lose ten or twenty in a year by the same course. If people were going to bring up feeding calves they should begin and never cease feeding, but keep the animals always progressing.

Mr. LEES, V.S., said he believed where many deaths from black-leg occurred in a stock, it arose from there being an increased quantity of fibrine in the blood; and to put a seton in properly would improve the quality of the blood. But he knew many cases where setons had been put in, and where many deaths had occurred notwithstanding. He believed the great thing was to keep the animals growing steadily, to feed them cautiously, and not to expose them to cold, which was the worst thing possible for them. He agreed with Mr. Bone as to Mr. Robertson's treatment of his calves. Green-cut or bog hay might not do them any harm, but oat straw was not fit.

KINGSCOTE AGRICULTURAL ASSOCIATION.

WHEAT GROWING.

At the last monthly meeting, Colonel Kingscote, C.B., M.P., in the chair, Mr. WATTS read the following paper on the Cultivation and Diseases of Wheat:

Although the wheat plant is really a native of temperate climates, it is nevertheless capable of resisting the severest winters of the north, as well as of thriving under the burning suns of the torrid zones. Thus wheat has a much larger range of habitat than any of the other cereals; which is a marvellous proof that it was intended by the Creator of all good to form the peculiar and chief food of all mankind. We see its cultivation encouraged in all the great divisions of the globe. In Asia, the chief wheat-growing districts are those lying between the Black Sea on the north and the head of the Persian Gulf, and the Red Sea on the south, embracing Armenia and Palestine. The countries bordering on the Mediterranean and Egypt are the wheat-growing districts of Africa. In Europe, the best districts are England, France, Italy, Spain, Austria, Hungary, Prussia, Poland, and Turkey. The wheat-growing districts of America are boundless, and even now only await the hand of man to bring them into cultivation. The rich, deep valleys of the Ohio, Missouri, and the Mississippi would, if properly cultivated, grow wheat enough to support nearly half of the inhabitants of the earth. Then there are the beautiful wheat-growing districts of South America, and Australia, from whence we get the finest quality wheats. Indeed, the climate there is perhaps more suitable to its growth than in any other country. Having said thus much about the places where wheat is chiefly grown, I shall pass on to the preparation of the land for wheat, a subject which is of the greatest importance; for the ultimate success of every crop depends in a great measure upon the condition of the plants

through the first stages of their growth, that is, from the germination of the seed until the plant has attained some degree of strength, say for the first three or four weeks after the seed is sown. If from any faulty condition of the soil, or the continuance of unfavourable weather, the plants remain in an unhealthy condition at this stage, they seldom or ever recover their vigour afterwards; and though the season may be most favourable during the latter part of their growth, yet this will not in all cases compensate for the mischief done in the earlier part of the season. With this fact in view how careful should we be that every circumstance connected with the seed bed should be properly seen to, so that we may render ourselves safe from all mishaps, *except* those arising from the weather! We should therefore after *good ploughing*, judicious selection of suitable and very dry seed, and careful sowing, place the seed in the ground under as favourable circumstances as we can, so that it may all germinate together. The question is, Do we as a rule look sufficiently into these important points connected with the preparation of the seed-bed? Are we not all too apt to neglect our ploughing for wheat, simply because there is still a little sheep keep on the clover leys?—the real value of which is imaginary compared with the loss sustained through putting off the ploughing till the sheep have fed off the last bite. The more we study the cultivation of wheat, the more we see the necessity of a stale furrow for the seed-bed, especially when the seed is sown upon a one-earth furrow. If we put our ploughing off till within three or four weeks of the time of sowing, we are then compelled to plough deeper in order to bury the sward more effectually as well as to get a sufficient tilth. The consequence of this is, that the rain has a much better chance of saturating

the soil furrow deep, thus giving the frost a much greater influence over it, which often leaves it in such an ashlike hollow state that the roots have literally no hold in the ground, and unless the roller can soon be brought to its aid, to consolidate the soil about the roots, the plant becomes sickly and very soon dies away. There is another evil attending the delay of ploughing, that is, we become alarmed at the lateness of the season, and therefore bring into the field all the strength of the farm; those who can plough are pushed on to turn over as much as they possibly can, and those who cannot must do the same. The result is that the furrow-slice is of very various depths and widths. Sometimes the ploughman has given his plough too much land, and has turned over a much broader furrow than he should have done, thus producing a low place in the land in which the water often lies long enough to make the plant perish. In another place his furrows are too upright, thus producing too much soil into which the seed is too deeply deposited below the surface. Then again the plough is allowed to lean too much to the side, cutting a furrow considerably deeper at top than at bottom, which in its turn will influence the seed-bed and the crop by stirring too little soil in certain places. Although these things appear of but little consequence at the moment, yet they have a very important bearing upon the production of a good and regular crop of corn. Clover leys designed for wheat should be ploughed up from two to three months at least before seed-time, in order that the sward should have time to get thoroughly decomposed, and the soil well consolidated. No amount of furrow pressing or rolling can give to the soil that healthy and firm condition which a natural settling does; and again when the harrows are put over these artificially-pressed furrows, they often leave a tilth as fine as ashes, which as soon as the seedling is completed, and the first heavy rain falls, becomes beaten into a smooth plaster all over the surface, thus excluding the air from the young plant, and retaining an excess of water about the rootlets which is most hurtful by reducing considerably the temperature of the soil. I like to see, after the seedling is finished (especially upon wet tenacious soils), the surface of the field studded with small clods about the size of a pebble; these not only shelter the young plant from the keen frosty winds, but prevent the soil running together in a very wet time. Neither does the seed-corn come up so quickly or so strong from a raw seed-bed as it does from one well prepared, of which we have abundance of proof every day of our lives. There is generally some drawback; the soil is either too wet or too dry, and plants cannot thrive in an excess of either. These mishaps seldom happen upon a stale seed-bed, for if the weather be ever so dry, there is generally sufficient moisture to cause the seed to germinate, or be it ever so wet, very soon after the rain has ceased to fall, the surface is dry enough again for sowing to go on, for the subsoil has attained a naturally porous state, so that the water draws freely away; thus showing that the success of the crop depends in the main upon early and good ploughing, in order that the soil may be as nearly as possible of one uniform depth, and in a perfect state of cultivation. The depth of ploughing depends in a great measure upon the strata of the land: for instance you upon the hills seldom require to exceed four inches, while in the vale we require five or six. As to top-dressing or manuring for wheat, that is entirely a question for the occupier; he is best able to judge whether or not his land is capable of carrying out the crop to full maturity. The difference in the quality of the soil upon almost every farm, and indeed almost every field, is so very various, that while one part of the field is as good as can be, another really requires a dressing of manure to enable it to maintain the crops through all its stages, and it is therefore well to mark these weak places, and help them out in some way or other. The selection of wheat for seed is too often a subject of very little forethought, although much disappointment may be avoided by carefully studying the character of the soils, as well as the habits of the particular variety of wheat which we are about to sow. Wheat is not a native production of Great Britain, therefore it has a tendency to degenerate, more especially in the colder districts of the north. In proof of this, seed sown in the same neighbourhood year after year, very soon becomes less productive, therefore we should look somewhat to the temperature of our own neighbourhood, as well as to the climate from whence we intend to get a change of seed. For a change of seed is as

necessary to the success of a wheat crop as fresh blood is to our cattle. The varieties of wheat are more numerous than of any other kind of grain, and are constantly being augmented, probably from the fact that the difference in the quality and colour of certain soils has materially changed the original character and colour of the grain and cause it to assume new names and to pass as new varieties. The quantity of seed required per acre has given rise to much conflicting controversy. Every farmer should be able to decide for himself by careful observation what quantity of seed his land really requires. Too thick seeding is both injurious and wasteful, for if the land is not in an efficient state to support one plant, how can it support more? but it is mere delusion to tell us that an acre of land can be seeded with a few quarts of wheat. From five to eight pecks per acre is ample upon land in ordinary condition. Climate, too, must rule the time of sowing. In my opinion all autumn wheat should be sown by the first of December, and all spring wheat by the first of April; after this a barley or an oat crop will pay better to grow than wheat. The depth of sowing is another point to which I should like to draw your attention. The soil is usually the medium of moisture and warmth to the seed, and it effects germination only as it influences the supply of these. The burying of the seed serves to cover it from the birds, and to keep it from drying up. I believe the medium depth should be about $1\frac{1}{2}$ inches, for if the seed is deposited too deeply it comes up weak and spiry. On the other hand, when sown so that there is soil enough to well cover it, the plant comes through quicker, and looks more vigorous and healthy, for air and light have a freer access to the roots, and without these no plant can thrive. To increase the produce of the land should be the entire object of the agriculturist. There is no business or profession which requires a greater amount of industry, perseverance, or forethought, than farming. The farmer has not only all atmospheric influences to guard against, but others besides, for after he has at a great expense and trouble brought his land into a perfect state of cultivation, and naturally enough is looking forward to and expecting a plentiful crop, how often does he find his hopes disappointed, without being able to imagine the cause! However interesting it may be to discuss the accidents to which wheat crops are liable, yet we can only take a general view of them. For instance, continued heavy rain is injurious to wheat. It keeps the roots so wet as to retard its growth, and if it should happen to fall when the wheat is in blossom it washes off the pollen prematurely, thus damaging the perfecting of the grain. Again, young wheat is often injured by very severe frosts in winter, and still more in the spring. When we get frost and rain alternately, the land is so wet that frost has a great influence over it, and so binds up the surface that it appears an inch or two higher than it should be, and breaks off the wheat at the neck. Snow is beneficial, inasmuch as it shelters the plant from the severity of the frost. Hail storms, too, are most destructive to corn crops, but happily they are of rare occurrence in this country. I well remember a tremendous storm of hail passing through a part of Oxfordshire on the 9th of August, 1814, just as the corn crops were nearly fit to cut, the like of which had never been seen before in that locality. After the storm had passed, the corn fields, which had only a short time before promised an abundant yield, appeared almost annihilated. The hail was so large, and fell in such masses, that it had almost destroyed the growing crops. Lightning has a great influence over grain crops, and no doubt much blight may be attributed to it. Crops suffer more in this country from wet and cold than from any other causes, yet drought also has sometimes injured them to a great extent; but wheat does not suffer so much from heat as some of the other cereals. In the extraordinary drought of 1826 and 1828 the production of wheat was good. We now come to what are more generally called the diseases of wheat. Bunt, or smut ball, is perhaps one of the most formidable diseases wheat is subject to. It is a species of degeneracy of the grain in the ear, which, instead of producing flour, as in a healthy grain, produces a black, dusty powder. Wheat crops infected with this disease are to a greater or less extent reduced in value. The means of preventing its ravages have fortunately long since been in the hands of every farmer. The modes by which smut can be prevented are so numerous and so well known that it is needless for me to mention any of them here,

except one, and that is vitriol. I fully believe that there is no other remedy more safe or sure than this. The quantity required is about 1 lb. per sack. Rust or redgum, again, is a common disease in wheat, and generally makes its appearance about June or July. It first shows itself on the leaves and stems of the plant in the form of orange-coloured spots. No remedy is known against this disease; it has defied every attempt to its cure, nor does the best cultivated land escape from its consequences. It often happens that lands heavily manured for wheat suffer most. Wheat land does not require to be kept up in too high condition, it is much better to keep it neither too rich nor too weak. Wheat sown on the sites of dung heaps shows extreme sign of rust in the most favourable seasons. Early sowing is one of the best preventives, as the ears are filled before the disease has been very injurious. The growth of hardy sorts of wheat upon land very subject to it is also desirable. Mildew is another wheat disease; this is a kind of fungus, and not only reduces the quality of quantity of the grain, but renders the straw almost useless for feeding purposes. There is scarcely any season but what mildew may be found in a greater or less extent, especially in damp and foggy weather, but if the damage done has not been too great, and the weather should again be favourable, the genial beams of the sun often dispel, in a surprising manner, the unhealthy appearance of the straw, and it ripens off as bright as possible. Among the various difficulties with which farmers have to contend in raising their crops, none, perhaps, are more trying than the ravages of all kinds of under-ground pests. Perhaps the first of these, and one of the most destructive of them, is the wireworm. It attacks the stems of plants close to the roots. Of all the insects with which we have to contend there is none more fatal in its effects, or more difficult to overcome. It feeds upon almost every kind of plant which it may happen to come upon, and the mischief done by these little animals is incalculable. There is scarcely any land where the wireworm might not be found, and but few crops that it will not attack; in fact, wherever grass grows the wireworm may be found, and this is the reason why newly broken up land so constantly swarms with these insects. We find them most destructive in dry seasons, and in a cold dry spring we often see the young plant turn from a healthy green to a sickly yellow. The dying off of the leaves indicates that the wireworm is at work. What is the remedy? A top-dressing of lime, soot, or salt will check their ravages; but as this cannot be done with safety when the plant is up, the proper time is to sow it upon the leys before ploughing. But when the plant is up the roller seems to be the most effective and only safe remedy, for by excessive pressure the wireworm are compelled for a time to descend into the earth. Mustard is also said to be a very strong preventive. I myself am of opinion that the wireworm can be kept down by starvation, by subjecting the land intended for wheat to an early ploughing, and thus depriving them of their natural haunts and food. Another wheat pest is the slug, which feeds upon the roots by day, and at night devours the blades of young plants. Grubs are also most destructive to the grain crops. Happily, Providence has so ordered that every season shall not be favourable to their production, or it would soon render the world a desert. Salt and lime are the best known remedies for destroying them. Two or three years ago our pea crop was so infected by them that I rolled the peas with a smooth-faced roller, and after this the crop suffered but very little. Further, there is the wheat fly, the mischief done by which is frightful to contemplate. Even in the season now past its ravages were most destructive. At the beginning of June we had as fine a field of wheat as ever man saw, perfectly erect, and as level as possible. All at once, as though it had been broken down with heavy rain or rough wind, the whole field became in a very scrawled state. Upon examining into the cause of this I found the straw in many cases eaten through, and in many others nearly so, so that the least wind could break them off. I found a small two-winged fly working away at the stem, with its eggs deposited between the leaves and stem of the plant. The plant louse or aphid is another of these extensive tribes which infect corn crops. They generally appear upon the wheat ears in July, and very much impoverish the grain by sucking the stems. But for the activity of the lady cow, these small green insects would do a very great deal of mischief to the grain crops. Providence, watchful of all His works has appointed one insect over another

in order that the destroyer should be destroyed, and thus keep them all in check. To enter into all the diseases and injuries to which wheat crops are liable, would lead me far beyond the limits of this paper. I will, therefore, end by asking you to give us, by a free discussion, your experience upon the cultivation and diseases of wheat.

Col. KINGSCOTE said his own observations would bear out what Mr. Watts had said respecting early ploughing. Some years ago, in one of his own fields, the ploughman had struck out a good many tops, and ploughed a bit on each side just before their ploughing match was to take place. They did not plough any more in that field for something like a month afterwards; the wheat on the early ploughed land looked much better all the winter, and the crop equally so at harvest, such a difference that you could see to a furrow. And only that very day, as he was riding along the road, he saw a field which looked exactly the same. He should like to know if there was any difference in the time of ploughing. (Mr. B. Drew said the cause of this was exactly the same as had been mentioned.) He (Col. Kingscote) would like to know if it was of as much importance to have the wheat ploughing done as early in the vale as on the hills; and the means (if any) to prevent the fly mentioned which caused such ravages amongst our wheat crops; whether the quantity of grass ploughed in one season over another had anything to do with the superabundance of these pests. He believed that when the plant looked weak and sickly the land required a stimulant, what that stimulant should be would be very important to know.

Mr. ROBINSON, who had farmed on the hills and now in the vale, believed in early ploughing for wheat in both districts, but more so in the former. It was a great mistake to plough deep for wheat, whether clover leys or after swedes or mangolds, and more especially if not done some considerable time before sowing. He believed in rising for seed the best and very dryest wheat. Their practise used to be to keep enough or buy old wheat for seed, and, although it was not in accordance with the age to move backwards, yet he was sure it would be a step to their advantage to return to that system. There was no need for preparing the seed, and it came up quicker and stronger. He had seen holes eaten through wheat stalks before now, and it may have been done by the fly which Mr. Watts had mentioned; but mildew, rust, and other diseases which the wheat crop is liable to, especially where it was very thick, or thin, or late sown, were caused from wet weather and black frosts at night. As regards manuring, the late Mr. Drew and Mr. Burnett had carried out experiments for some years, and speaking from memory the result was not satisfactory. The best was soot, and second best guano.

Mr. HAYWARD could corroborate every word that had been said in favour of early ploughing, especially on the hills. To grow wheat successfully you must have a good seed bed, the best and dryest seed, and the firmer you compressed the land the better. His experience was quite in harmony with all Mr. Watts had said.

Mr. B. DREW (Boxwell), not only fully agreed with Mr. Watts, but could endorse the opinions of all the other speakers. Several times he had put off his wheat-ploughing till late for the sake of the keep on the land, but had always burnt his fingers by so doing. The result was he had to plough and sow again in the spring, and, if not, he had two or three sacks less per acre than by the early ploughing. As had been said, many of the diseases which wheat and all other cereals were liable to might be in a great measure prevented by care and attention to modes of treatment.

Mr. C. FORD said Mr. Watts had recommended salt or lime as a means of destroying the wireworm and other insects which injured the wheat. He would ask which of them was the best, and the best time to apply them? From his experience, he could not speak in favour of preparing (or what we term vitriolling) old wheat for seed. On two occasions he had done so, and the wheat never came up.

Mr. WATTS said not less than 100 bushels of lime, or half-ton of salt, applied before ploughing.

Mr. BURNETT proposed a resolution to the effect, that facts bear out most fully the ideas of Mr. Watts, whose paper is, therefore, a source of reliable information. This was seconded by Mr. HAYWARD, and unanimously carried.

The usual votes of thanks closed the proceedings.

THE AGRICULTURAL SOCIETY OF NEW SOUTH WALES.

HORSES AND HORSE BREEDING.

At a meeting at Sydney, Mr. MOSTYN read the following paper: "Horses and horse breeding" is a very large title and a most comprehensive theme; in fact, like many other things, it astonishes one who fancies he has mastered it, by its magnitude and the little he really knows. I feel in this predicament at present, for there are so many ways of handling the subject and so many ways of looking at it, that I'm sorely puzzled where to begin. During the last few days the horse of New South Wales has been on his trial; and so suppose that to him I address myself, and I do this more from a hope that some discussion may be provoked by what I say, than believing I shall be able, unassisted, to do any good. In such case, good invariably follows the full discussion and ventilation of a subject, and, judging from what we have lately seen, the Australian horse, poor fellow, is in need of assistance. The question for consideration appears to be: 1st, Whether the present New South Wales horse is what he should be; 2nd, Whether he is deteriorating; 3rd, What sort of horse we want; and, lastly, How to breed him. We continually hear a great outcry made, the sum and substance of which is, that our horses are not what they were in years gone by; and much argumentative capital is and has been knocked out, by writers who have worn the subject completely threadbare without throwing much light upon it. I believe there are many pros and cons that may be fairly imported into any argument on the present and past Australian horse; for allowing that we do not see so many good useful nags as we used, compared with the number employed, it must be remembered there are now ten horses employed for every one that was, many years ago; and, independent of the falling-off sustained through carelessness, it must be admitted that the good horses will be absorbed by an increased demand as well as the rubbish. My own experience, running over five-and-twenty years in Australia, reminds me that, since that time, there has been, at all events, no improvement in the useful horses of this colony; but, on the other hand, they are either fallen off from what they were, or I see them with very different eyes. Herein may arise the adverse opinions to horses of the present day. I well remember when first I arrived in Victoria—about 1848—that almost every good looking useful hunter or harness horse one saw, came either from New South Wales or Tasmania; and right good horses they were. There must have been here in those days some good mares in the breeding studs, and their owners had sense to keep them, besides using none but the best sires, so that the strains of Whisker, Theorem, Staeltrap, Model, Hector, and Emigrant were everywhere to be found. The hackneys of that time did prodigies of work, and it was quite inexplicable to Englishmen how they did it, having been all their lives innocent of shoes without, or hay and oats within. I take it, the hard and nutritious nature of the indigenous grasses, and the absence of macadamised roads, had much to do with enabling these horses to undergo a marvellous quantity of heavy work without giving way; and I will commit myself to the opinion that, in a country like ours, for any work not requiring extreme tension and taxing of muscles and lungs, the horse in a state of nature will prove most enduring. The late Mr. John Christie had some really good weight-carrying hacks at the time I speak of, and they struck me very forcibly as a new arrival from England, being vastly superior to all others I saw. Mr. Christie then lived at Kyeta, on the Lower Murrumbidgee, and he had brought his horses from the Wellington side. With all our changes and improvements, I question ever having seen four better horses of the sort belonging to one man in this colony since. A great deal is said about the falling-off in the Indian trade; but there are half-a-dozen ways for accounting for this. When our horses were pretty good, and well liked as remounts for the Indian army, colonial breeders became anxious to increase their stock very precipitately, and by so doing they succeeded in producing an article that was useless at home, and without a market value abroad. These ill-judging settlers, in their

anxiety for numbers bred from anything in the shape of a mare, and put her to anything in the shape of a horse; the consequence being that the country was overrun with hordes of rubbish which have long since defied all efforts at extermination. Our neighbours on all sides have acted a wiser part; and, quickly perceiving our weak spot, they came here at once and spoiled us of all our mares worth having; so that, while we kept going farther and farther back, they raised themselves on our weakness, and beat us out of the market. A great question is, whether the New South Wales horse-breeders of the present time are not as short-sighted as they of the past; though possibly their mistakes do not arise in the same quarter, nor from the same cause. I have no doubt the horse of New South Wales, as generally seen in these days, is not what he should be. I am equally sure he is degenerating, or, at any rate, not improving, and the blame lies with the breeders themselves. Carelessness as to the stock selected for breeding from, and carelessness in the rearing, are the main faults; and these arise from a careful belief in many a breeder's heart that everything he has is better than all else. He will not enter into any friendly contests for superiority of stock; he lets his foals, yearlings, and two-year-olds live as they can, or starve if they can't; and, after a few years, he finds himself the possessor of a stud of weeds, while his neighbours ride and drive well-bred weight-carriers, almost fit to win a Queen's Plate. Can anyone who looked through the Horse Section in Prince Alfred Park doubt that the apathy of breeders is ruining our horse stock? or say that the show was not a positive disgrace to a horse-breeding country? The blood horse classes were terribly deficient, the hackneys, hunters, and harness-horses showing, certainly, no improvement, and the draught classes, entire excepted, giving plentiful evidence of falling off. That something must be radically wrong in this is evident; with 3, 0, and 2 males, 4, 1 and 3 females, and a single mare and foal exhibited; and none but the breeders are to blame. If it be the conditions or time of year that are unsuitable, the breeders are the proper persons to object, and so have the difficulty got over. If properly supported, there is nothing that can do so much towards improving our horses as the Agricultural Society; but the Society cannot do this work alone, nor without the assistance of the breeders themselves. And now what sort is the horse that we want? He must be strong, active, well-shaped, and well-bred, whether his breed be that adapted to light or heavy work; for there is as much difference between a Leger winner and common hack, in the breeding of your noble prize draught-horse, with his fine head and neck, majestic carriage, and a walk that can take him half-a-dozen miles in the hour, and that ugly brute, with a great fiddle-head and pig's-eye, and legs, each of which would make a good stable broom. It matters not what you want a horse for, he must be well-bred. An ounce of blood is worth pounds of bone; and although the latter commodity is an absolute necessity in a heavy draught horse, there must be the right blood in an Atlas, a Conqueror, or a Scotch Jock, as well as in a Tarragon or a Barb. We have here plenty of race-horses, whose owners apparently don't care to show them at the Exhibition; but how many of the other horses we saw on Saturday and Monday have any pretensions to a place on a prize show ground? What this colony is at present badly off for are useful horses, up to weight and long journeys; and until we succeed in breeding a goodly supply of these every year, we are not likely to again see our old place in the Eastern market, or to be in a position to mount ourselves on horses of what we are wont to call "the good old sort." Occasionally, one meets with a rare cut of a hackney; but they are getting few and far between, and when found are always very old. These facts are wonderfully suggestive. The horse we want, to be what we want, must be as nearly thoroughbred as possible, if not quite so; for, if it be proved beyond a doubt

that thoroughbreds are *facile principes* at carrying twelve stone over four miles of a steeplechase course, or going over fifteen or sixteen miles of a hunting country with a crack pack of hounds, and sixteen stone in the saddle, then I for one have no doubt that as near as possible to the same animal will be the one that is best for the journey of a day, a week, or a month, or to go successfully through a campaign to "Cabul." When the ten-mile race was run at Wagga Wagga, I remember hearing folks say they would like a big strong half-bred horse for it; but the race-horses finished in front; as they always will, and would have then, had the distance been ten times what it was. I am all in favour of good blood if good work has to be done; for whenever great feats have had to be performed on horseback, blood has been the main thing sought for, and that we must have in the horse we want at present. Of the possibility of breeding such animals, I have no doubt, for there is no instance on record of a demand being created without a supply arriving to meet it. Within my recollection of hunting in England, hounds and horses were very slow, and people hunted more for passing away time than for getting over a certain piece of country at a great pace; but when the breeding of hounds was reduced to a science, and the hound improved in speed, he used to run clean away from the heavy, square-tailed, half-bred nags, our forefathers rode; and then it became necessary to breed horses that could live with the spotted beauties, who, when their speed increased, gave much less tongue than those that preceded them. No sooner the necessity was discovered than it was met; and shortly the bang-tailed thoroughbred replaced the old English hunter at the covert side. Then came the palmy days of steeplechasing; when, after Captain Becher, Mr. Crommelin, Bill Bean, Seffert, had made Moonraker, Vivian, Grimaldi, and their fellows famous, came Jem Mason and Olliver, Lottery and Gaylad, to race over the country as the others did on the flat; and the fact became established that thoroughbreds were the horses for "fast things" over the grass pastures and ox fences of The Shires, or delve through the Vale of Aylesbury with the Baron. And if so in England why not here? What reason have we for not breeding horses to do good things, while we have climate, soil, and grasses equal to any in the world? There is simply no reason whatever. So, let us see how they are to be bred. First, thoroughbred sires, and the best. Then, well-bred mares with plenty of size. To breed from weeds is simply an absurd waste of time; for, however necessary blood may be, and I say that it is absolutely necessary, there must be some points as well. A great rock on which many Australians have split is the breeding from any mare, because she was a thoroughbred horse of Mr. Jones, or by a horse imported by Smith Robinson; or because she was out of what people persist in calling "an Arab mare." Anyone who breeds from weeds—without character, or shape, or strength, simply for the little drop of blood they are supposed to possess—will soon find his horses lowered to the size of ponies; and good for very little, or any good purpose. I never saw a stud of mares in the colony in which there were not a lot of mean-looking common things that could hardly, by anything short of a miracle, breed a good horse; but I always notice that these mares, without exception, have long pedigrees, running back to somebody's thoroughbred horse, or somebody else's Arab mare. A great evil I have noticed, which accounts for the lot of common rubbish one meets with in the country, is the sort of idea that anything will throw a hackney if she is put to a good horse. Nobody would breed for a race-horse on such a principle. On the contrary, if anyone wants to breed a race-horse, he will look out for good blood and good points, and good performances; if he wants a heavy draught horse, he will choose a big square mare, with as much power as possible, as broad a chest, with the biggest bone below the knee, and a big roomy middle piece; but when hackneys are wanted it is the custom to say "Oh, I'll buy a dozen cheap things out of pound, and put them to a thoroughbred colt I have in the paddock, and they'll throw me some hackneys." This is said without a thought that the most difficult animal of the horse kind to fud ready, or to breed for oneself, is a right good hackney, seeing that we have not arrived at any conclusion what crosses, if any, are best when breeding expressly for hackneys. I'm sure that we don't get activity and action by breeding from what are or used to be called Hunting Stallions; and I quite believe in going as near to the English thoroughbred as possible. Many persons be-

lieve in breeding from Arabs; and no doubt, of course, our blood stock all trace back to the Arab and the Barb; but I think we should take into account the immense difference there must be between the mares that were mated with Arabs about the middle of last century, and our present thoroughbreds; and, for my part, I should never think of breeding a race-horse by mating a thoroughbred mare with an Arab. What owner of a crack herd of improved shorthorns would think of hunting about to get a Durham bull of the old sort, from which the cattle take their name, and mating him with his best cows? Yet this seems as feasible as running back with our horses at a single stride to the Arab founder. I can see no why nor wherefore; but, on the contrary, I say *cui bono* have we spent a hundred years in bringing the race-horse to a greater state of perfection if we are to go back to the point from which we started to look for improvement? Breeding is a difficult science indeed, and one which few people understand, and I don't pretend to; but I'm sure it doesn't consist only in putting a strong horse to a weedy mare, and expecting the former will drive away the faults of the latter; rather, I think, would the reverse be the case, and the bad qualities be strengthened in the produce, to the extinction or weakening of the sire's good ones. Endeavour, I say, to provide a double quantity of the good, which may thus become powerful enough by its redundancy to nullify what is complained of. From what I see of Arab horses, their symmetry, and the way their purity of race is maintained, I come to the conclusion that their masters in the desert must thoroughly understand the mysteries of breeding; and we read that these desert breeders pay much more attention to the choice of mare than horse; indeed, we know that good Arab mares are not procurable for export. This special attention to the choice of mares I should take to be the chief reason of the Arab success, seeing that it is the exact opposite of our neglect of the mare which has evidently been so ruinous. In race-horse breeding we do pay some attention to choice of mares; or, at least some of our breeders do, and they turn out a good many winners; but there are others I could name who go on year after year breeding from the same old strains and old mares or their daughters, and never by any chance do they see their horses even run second. They have a bad foundation, and would do better to cut the throats of the mares, or export them, and buy new ones with part of the proceeds. Promiscuously breeding in-and-in I have a decided objection to, simply it may be because I prefer practical results in the matter of breeding horses to all theories I ever heard; but I go so far as this, that when there are certain strains of blood that have proved successful when joined and conjoined, I don't believe we can have too much of them. As I have said, I cannot believe in breeding in-and-in promiscuously; for I don't think anyone ever saw a good horse (though he might be good-looking) that came out of a wild mob in which breeding had been promiscuously carried on for a few years. I have seen them tried often, and always with the same results. Either they were perfect weeds—being, as I supposed, the produce of very young fillies and colts; or if they had plenty of size, and good looks enough, there was always something about them that made them worthless. The practice of buying and shipping colts of this description, so as to make the price of one purchase four, has no doubt had a great part in giving us the bad name as horse-breeders we have had for some time in the Indian market. Choose big roomy mares, and if you breed for racing be sure you pick mares with winners in their families. I see in some studs mares I wouldn't have at a gift if they didn't breed winners, and others not worth twopenny, because they don't; and these want discarding. I shall be told that it's not so easy to get together a stud of mares; but I'm not foolish enough to suppose you can get them together in a year, or five, or even ten. Mr. McDougal would tell you that it has taken him many years, and always will take many years to establish a herd of first-class cows; and, if a herd of cows can be obtained to please a breeder by carefully breeding them, I see no reason why a stud of mares cannot be made a certainty of on the same principle. The horse-breeders of New South Wales tried hard and successfully for more than ten years to spoil the breed of horses which, a quarter of a century ago, was a very forgivable boast; and it's high time they gave ten years to a trial at remedying the mischief. If they'll try the experiment I've no doubt they will succeed. Pick the best of mares with blood, bone, and substance, discarding every weed, no matter how many

thoroughbred horses and "Kitties" you find in her pedigree; and spare no expense in a sire; and if you won't get too fond of your own, the chances are much in your favour. In your choice of a sire, don't be afraid of getting too much of the "Waxy" blood, which we are fortunate enough to have in plenty here in Australia, and than which there is nothing better. The more times you find the names of Whalebone, Whisker, or Web, in a pedigree, the better it will be for you; and remember the Touchstone family, through Orlando; and the Sir Hercules family, through Birdcatcher, the Baron, and Stockwell, down to Rose of Denmark, Florence, and Hamlet. If you breed for racing, always choose mares, if possible, that have bred winners, and better still, stayers. In Australia we have Cassandra, Flora Major, Mr. Lee's Marshness, and Gaslight; besides many more, no doubt, if I were to rake them up; and the name of Pochontas is a household word in England. I have a prejudice in favour of old sires, of which there are some great instances. Corinne, winner of the Oaks in 1818, was by Waxy, who won the Derby in 1793; so that he must have been twenty-five years old; and I know instances which do not occur to me at the moment, of horses being the sires of winners at twenty-eight. We are well off for sires here at present; but in want of mares. The best blood of England is here now, and we want no other but the best blood still. Late importations of blood-stock fall far short of the mark as if buyers in England for the colonial market thought anything good enough, and about the same as articles one sees every day advertised as being *manufactured expressly for the colonial market*. These I carefully eschew, as I will also English horses, if I see many more of the sort that have lately arrived. I don't speak without exception. There are prejudices plenty against young sires, and certainly I prefer the older ones, but the success of Ferryman and Maribyrnong makes me attribute the usual poor results with very young horses their having been hardworked in training up to the time of going to the stud, while the two horses I speak of did little or no training. It may be said that Tarragon and Yattenden, while in training, took their season at the stud; to which I can only reply that Tarragon's training work was very light; and that, while Yattenden did double duty as race-horse and sire, his triumphs through his stock were small indeed—and we have nothing of his nearly equal to Jav'lin. No breeder will ever establish a good stud of mares without commencing at once, and cutting out every weed. Never mind if you have only a couple left, you will make more money out of them eventually than out of dozens of rubbish. Breed for blood and size, and the good points will come. I can fancy nothing better than King Alfred as a sire, for his stock are all strong, and with plenty of quality; and unless they are good behind—thighs, hocks, and gaskins—they can't jump as all his horses do. One great reason why we don't have more good horses is the way our young stock are ill-treated. In many cases on goes the rope, then the bridle, then the saddle, and then the man; and in a couple of hours some rider of buckjumpers in careering away on him as if he'd been under saddle all his life. Then again, before this part of the education is come to, the colts are often starved almost to death's door, through neglect when they are very young; and these take a long time to come round. Among thoroughbreds, if a colt is to race early he must be well taken care of from his foalage; his dam must have good keep, and he himself be fed well in good pasture, with corn and bran twice a day, so soon as he will eat it; for it takes at least four years for a colt, not artificially fed, to obtain the size and strength and muscle he requires to have to race at two years old. I believe, though, that a horse allowed to grow up on natural grasses, handled and kept in stable for a couple of months, so as to be quiet to ride at three years old, and then allowed to run out again till five, will be constitutionally much stronger, and last longer

than the one who was highly fed with inflammatory food long before his stomach was strong enough to receive and digest it properly. Anything, however is better than early starvation, from which horses seldom or never recover. I know one of the finest and best horses in the country, who has defied all efforts to train him, on account of some undiscoverable constitutional ailment; and his owner attributes it solely to having been starved as a foal. I see there is something doing in the manufacture of pedigrees for horses that have left here and gone to India; and if some foreign potentate would only relieve us of about half the mares that form our breeding studs, it would pay well to give them good pedigrees to get rid of them. It is both amusing and instructive to observe the vast difference between the old horses of England forty years ago and those of the present; and the difference in treatment is as great as in the animals. In the days of the old square-tailed, slow hunters, I'm just old enough to remember how at the end of each season all the horses were turned out to grass, and before they went out, the hunting-groom carefully bled them all, whether they wanted it or not. They then remained out through the summer, say till the middle of August, having had in the meantime, all their beautiful condition, that took all the season to put on them, as well knocked off; and when they came up, they were all as carefully bled as they had been on going out. Some might be fat, and others as poor as crows; it mattered not, for they all were treated alike; and the consequence of this treatment was that these hunters were never got fit to go properly through a run till the season was more than half over. The celebrated Mr. Apperly, better known as Nimrod, was the first to advocate a system of summering hunters in the house, and also clipping those who through the old grazing system had very long coats. For a long time he tried in vain to reason people into his views, writing in *The Sporting Magazine*, against plentiful opposition. After a while, however, his opponents had to give way, and the new *regime* was extensively followed. Universal phlebotomy among hunters was done away with, clipping in the first instance, and then singeing, became the rule instead of the exception, and for the last five-and-twenty years such a thing as turning out a hunter to grass is unknown. The days of the slow square-tails were those in which lived the good old country squire celebrated in many an old hunting song; but to that generation succeeded the straighter and faster-going Meltonians described by Nimrod when he told of "Snob" and the Little Bay horse, in that well-read and re-read run from Ashby Pastures; and we become painfully alive to the pace that kills, when we read that "Snob pulls up at the gate, and John White goes over the henge post, and Captain Ross follows him," and are shown in a capital engraving where "The Little Bay horse will have no more." Hounds, horses, and men all got faster, and it was well, as they had to do so, that the system of summering horses was changed according to Nimrod's idea, for they would never have been able to live at all. There is no doubt that the vast tension of muscles requisite to live with hounds now requires the condition to be continually kept up to concert pitch, which it could not have been if the horses were turned out for four months at a stretch. The same thing, I believe, applies to throwing race-horses out of work completely; for it takes so long to fetch them up to the mark again, that the trainer is very liable, in his efforts to get them fit, to find them go all to pieces before they are half prepared; and so, very likely, he loses a valuable horse.

A discussion took place on the question of breeding from Arabs, in which the Chairman, Messrs. George Rouse, A. A. Dangor, and other gentlemen took part; Mr. Mostyn explaining that his opinion was against Arab sires for race-horse-breeding, though not so much so in breeding for hacks; but in no case did he believe in putting an Arab sire to a thoroughbred mare, and then breeding from the produce of this cross.

LAVENHAM FARMERS' CLUB.

At the last monthly meeting the subject for discussion was The loss of Force in Agricultural Production, introduced by Mr. D. T. Fish, of Hardwicke. The chair was taken by Mr. W. Biddell.

Mr. D. T. Fish said; Shallow cultivation is one of the

most perfect contrivances for waste of force that could be invented. Supposing you purchased a coal mine with five or six seams of good coal, one on the top of the other, and could only be persuaded to work the upper seam? But this is virtually what thousands of cultivators are doing. Year after

year they go on and on, scratching the surface to the same depth. They seem positively afraid of a god Pan that has slumbered for ages in the bottom of your furrows. You will find all other traders and manufacturers anxious to get as much raw material as they can for their capital; simple and bulk must correspond and full measure assured. Agriculturists are keen business men in most matters. Few are a match, none can overreach them in the purchasing of stock, farm implements, &c., but in the hiring and the use of land many seem to have forgotten much of their wisdom and business acumen. The ruling passion appears to be to get as wide a surface as possible, and to keep close to it ever-after. No matter how rich the soil below, the Pan must not be broken. The upheaving and overthrow of this idol is the grandest revolution that has ever been effected in agriculture. But there are still thousands of acres where the violent throes of this revolution have not yet been felt. Shallow tilths are still the rule, deep the exceptions; and many of those who have overthrown Pan seemed afraid to go lower. The fact seems still generally ignored, that the earth is not simply a store house for plant food, but is itself, to a very great extent, that food. It is the great bank from whence they draw their mineral constituents, those earthy matters that form the bony skeletons of plants. The deep cellars of the earth are richly stored with salts, lime, and iron, and we have only to open the door with our cultivators, for the roots to enter in and find abundance of all their inorganic elements already for use. These are to the plant and its capacity for food-making what large bones and powerful muscles are to the workman—the core, the solid foundation of their strength. Many languishing crops are crying out for mineral food. Instead of this their mouths are filled, and roots fed, with organic manure. The crop gorge themselves into fatness with this, and when the rain and the wind sweep over them down they fall to rise no more for the lack of that mineral food that lies wasting beneath them. It seems almost within hailing distance of the roots, but they cannot go through the Pan compressed into an impenetrable barrier by the plough-sole and heavy feet of men and horses for generations. It appears unaccountable that this great source of productive force, the *naev stratum*, should have been neglected so long. For if one thing more than another is purchased by the rent of land, surely it is the right to use the earth itself freely in production. And yet this right of going down has, until quite recently, been allowed to lie in abeyance. Even top-dressings have been purchased and carted at great expense, when as good or better could have been found at the bottom of the furrows. This deepening of the tilth, however, should proceed with caution. First loosen, then enrich, next invert, and finally incorporate the under with the upper soil. Some enthusiasts have brought reproach on deep culture by doubling or trebling the depth of their tilths at once, thus scattering an irruption of barren earth over the surface. Such cases are sure to be cited as proofs positive against deep culture. But how deep would you go? We will answer this question by another—How deep will the roots go? Did ever you see a tilth that they did not bottom? I never have, and yet I have seen tilths four or five feet deep, and have found the roots of green crops, swedes, mangold, cabbages, and sugar-beet pierce through them into the subsoil. Even wheat and other corn plants have been traced down to a depth of five or six feet. There is, however, another mode of answering this question of depth. How deep have others gone? The twin sister of Agriculture, Horticulture, that some of you consider a little fast, has already reached a depth of from three to four feet. And it answers so well that the rent and produce of garden lands throughout the kingdom is probably ten-fold that of agricultural land. But, as I have already remarked, the deepening of soils must be a work of time, and in the course of fifty years probably the tilths of your fields will have reached a foot, 18 inches, or two feet. By whatever mode we attempt to assess the value of a deep tilth, its overwhelming importance to successful production is borne in upon us. The earth is the chief staple of the raw material of agriculture, and our compounding medium for most of the other needful accessories. By deepening your tilths you double, treble, increase, perhaps a hundred-fold, its natural fertility, and increase immensely the produce of the land. Both partners in the firm agricultural, the sleeping and the working one, are thereby enriched, and the whole community reaps the benefit. Shallow ploughing is simply a reckless sacrifice of

force, profit, yield. It, of necessity, puts the roots of plants on short-commons, and compels them to live in the worst possible place for the utilization of such food as they have. Every change of weather affects their power of consumption, and they are over-run with rival roots in all directions. Try to run along a crowded thoroughfare, you are hindered at all points, and your progress is slow. It is even so with the roots on shallow ground. They eat each other up and fetter one another in all directions. The remedy is alike obvious in both cases. Widen the thoroughfare in proportion to the traffic, deepen the root run, if you would avoid a block or ruinous competition among the roots. As to the feeding of land with manure: On shallow soils the food is too high for the mouths of the plants. It is as if you placed your food above the heads of your bullocks. Christmas beef could never be manufactured were they only to smell the rich cake, or depended upon a passing shower to wash down a few drops of coloured soup out of it. Yet this is literally all the benefit the roots in shallow soils get from much of the manure. Nature sends the roots down, but the shallow cultivator keeps his root food on the top. Is it any wonder that lean harvests are the rule under such arrangements? The plants get a taste of good things at starting, but the roots speedily outrun their larders, and then comes that worst of all catastrophes on the line of growth—a stunt, ending in a light harvest. There was no branch of agriculture in which there was more loss of force than in the preparation and application of manures, which present themselves to us chiefly in three general forms, the solid, liquid, and gaseous, and they are mostly valued in the order in which I have placed them. Nevertheless, their real value is the reverse of that order. "Solid muck; yes, that's the stuff, we can appreciate that, sir." Well, doubtless, and so some profess to prize Suffolk bang cheese, and Norfolk dumplings, though what merit they possess except that of extreme hardness, toughness, and leanness, it would be difficult to discover. It is frequently just so with solid dung: all its gases dissipated, all its strong soup gone into the nearest ditch; it is the mere bony skeleton of what manure should be. Did you ever see pigs when they tried the husks of nuts or acorns; how greedily they crack them, turn up their noses, and trudge off grunting "done again." Just such a verdict would millions of roots utter, were they endowed with speech, as they are "taken in and done for" with our skeletonised manures. Figures are more eloquent than facts. The following, taken from the *Agricultural Gazette* of last year, give the value of the manure from one ton of each of the 32 different feeding stuffs named:

	£	s.	d.
1 Cotton seed cake, decorticated.....	6	10	0
2 Rape cake	4	18	0
3 Linseed cake	4	12	0
4 Cotton seed cake, not decorticated	3	18	6
5 Lentils	3	17	0
6 Beans	3	14	0
7 Tares	3	13	0
8 Linseed	3	13	0
9 Peas	3	2	0
10 Indian meal	1	11	0
11 Locust beans	1	2	6
12 Malt dust	4	5	6
13 Bran	2	18	6
14 Coarse pollard	2	18	0
15 Fine pollard	2	17	0
16 Oats	1	15	0
17 Wheat	1	13	0
18 Malt	1	11	0
19 Barley	1	10	0
20 Clover hay	2	5	6
21 Meadow hay	1	0	6
22 Bean straw.....	1	0	6
23 Pea straw	0	18	9
24 Oat straw	0	13	6
25 Wheat straw	0	12	6
26 Barley straw	0	10	9
27 Potatoes.....	0	9	0
28 Parsnips	0	5	6
29 Mangel	0	5	3
30 Swedish turnips	0	4	3
31 Common turnip.....	0	4	0
32 Carrots	0	4	0

It is impossible to add anything that could give additional force to these figures. They cry out against waste with irresistible force. The richer the manure the more soluble, and the easier spoilt. Which of you, when you buy guano, crushed bones, phosphates, salt, leave them out in the rain? But what of your home-made guano from cake-fed bullocks? That is quite a different matter. Speaking on the subject of how to apply, or in what state to use, manure so as to develop its power of production to the uttermost, he remarked: "Much as I respect Mr. Mechi, I cannot agree with him about the application of his guano pudding, and with all the rich gravy he serves out with it. He must help it sparingly, or mix plenty of earth with it, as I saw no proof of the evils of rank manuring at Tiptree during last harvest. There is a twofold loss of force in the use of rank manures—there is a waste of the excess of plant food, and the injury to growing life of an overdose. Strong stimulants are about as hurtful to plants as to ourselves. They scorch, wither, destroy the delicate organs, derange the circulating media, and disturb its regularity; besides, plants cannot consume raw food. Manures should be partially cooked, that is, decomposed, before they are set before the roots. With reference to the question of where should manure be applied—on the surface or under it, near the top or at the bottom of the tilth, Mr. Fish said: Perhaps the best answer would be, to incorporate it as thoroughly as possible with the whole soil. See to it that it is all covered, and that some of it reaches to the bottom of the cultivated earth. I know that many agriculturists believe in manuring the surface early in the autumn, and leaving the dung to weather there for weeks, it may be months, before it is covered in, and that good crops are reaped from this method. The reason is this—there has been a most terrible loss of manurial force, as our own senses testify; but, then, the manure left has been decomposed and made available, and hence the good yields; nevertheless, all those unctious odours that tainted the air for miles were a sheer loss of productive force. We now reach the last point—the best time, or when, to apply manure. The answer is mostly determined by convenience, weather, &c. Dry or frosty weather should be chosen if possible. Another point or two are worth notice here, such as the mechanical effect of the manure on the tilth, its direct influence on the special crop, and the character of the manure itself. Hitherto I have spoken only, or chiefly, of farmyard manure. All artificial manures, such as guano, superphosphate, &c., are probably most effectual when applied as top-dressing. To develop to the full the mechanical effects of bulky manures the earlier in the autumn they can be applied the better. The entire tilth is thus converted, as it were, into a sort of compost heap. Slow decomposition proceeds, and the gases liberated are held fast in the fine sieve-like network of the pulverised earth. Those who cannot prepare and store their manures under cover can hardly do better than cover it in as speedily as possible in their fields. There was a loss of force in agriculture arising from the misapplication of manures. A few years ago farmyard manure was the be-all and end-all of farming. It had many rivals now, and special manures were also offered for almost every separate crop. The experiments that had been made from time to time established the fact that the permanent fertility of the land can be kept up by artificial manures as well as by farmyard dung. From a summary of these experiments given in the *Agricultural Gazette* of last year, he quoted the following: In the wheat experiments the average of 26 successive crops grown by farmyard dung, at the rate of 14 tons to the acre, was 11 barrels of wheat per Irish acre. With artificial manures and a moderate amount of ammonia the average was 12 barrels per acre, and where we used a larger amount 13 barrels. With barley the farmyard manures gave, on the average, 19 barrels, and the artificial manure about the same. On permanent pasture, by the use of 23 tons of dung per Irish acre, the yield was 3 tons 9 cwt. of hay, with the artificial manure 4 tons 6 cwt. The average yield of a permanent pasture manured for six years in succession, with 14 tons of farmyard dung per acre, was 43½ cwt. The average produce of mineral manure and 400lbs. of ammonia salts every year for 14 years, 54 cwt. of hay per acre. Again, the average of crops of grain for 18 years, with mineral manures alone, was 17¼ bushels. The average grown by ammonia salts was 31½ bushels, or nearly 14 bushels per acre per annum more. By doubling the amount of ammonia the produce of the barley rose from 45½ to 49½ bushels.

Further, after a liberal application to the root crop, which proved a partial failure of rape cake, salts of ammonia and mineral manure, the crops amounted to 60½ bushels of barley, 43½ bushels of beans, and 46 bushels of wheat per acre. In conclusion, it is not only that we misapply manure, but the best part of it is thrown away by wholesale. When you have a boiled leg of mutton or shin of beef, what would you say to your wives if they threw away the broth? This is what thousands of agriculturists do with their manure soup. It is full to repletion with all the raw material of growth, produce, ready for immediate use. But what of that—it is only liquid? therefore away with it to the horse pond, ditch, river, anywhere, everywhere but on to the land. Only liquid? Why plants live, grow, ripen, on no other food but liquid, and yet more attenuated gases. Liquids are the richest food in the most consumable form. The liquid excrements are not husbanded, and the richest portions of the solid manures are mostly washed away by the rain, or whipped into space by the wind. The land is half-starved that the water may be polluted or choked up with rank weeds and horse-tail, whose size and strength are at once a nuisance and a protest against the prodigality of our waste. A maximum yield will never be reaped until all this is altered, and this wasted force turned in fructifying streams on to the land.

Mr. R. HAWKINS expressed his opinion that the enthusiasm of the gentleman who had introduced the subject for the discussion had carried him beyond his reason. It was certainly altogether impracticable for them, as agriculturists, to carry out the ideas which had been advanced that evening on many points. Mr. Fish had altogether overlooked many of the difficulties which they had to contend with, having, amongst other things, taken it for granted that they had covered sheds to their occupations. Farmers had to make their manure, get it on to their fields, and spread it, in a great measure, altogether as circumstances permitted. With regard to deep cultivation, that no doubt was very desirable, but how were they, at present, to attain it? It was true that Mr. Hitchcock succeeded in getting the steam cultivator on to his land after much difficulty, and he, like a wise man, kept it, and it was the wish of all that it might answer his purpose well. But, after all, it must not be forgotten that agriculturists had the seasons to contend with, but Mr. Fish had assumed that with the use of manure and a careful preparation of land, there was a certainty of a good crop. Instances of the worst result from the best farming were not uncommon. Allusion had been made to what had been called the liberal terms offered by Lord Leicester to his tenants. He (Mr. Hawkins) could not see that there was, after all, such an exhibition of liberality as some attempted to make out. If the land was drained, the tenant had to pay for it at the rate of five per cent. That was not very liberal. He had an idea that he could do it at 3½ per cent. in a twenty years' lease. Lord Leicester had been very stringent in many of his leases, and all he (Mr. Hawkins) could say was that he should not like to be one of the tenants. With regard to the question of manuring on the top, he had for many years past manured his clovers in the autumn, and he might say that he had been exceedingly well satisfied with the application of farmyard manure in this way. He had manured a portion of a field of beet on the top in the month of March, and he had a fine crop in that particular portion. He did not believe that manure suffered from exposure provided it was spread on the ground, when the ground readily seized all the good qualities of the manure. At Michaelmas he put manure on one portion of the field of mangold and on the remainder, as he had said, in March, and he never wished to grow better mangold than those on the latter portion were. The suggestions in the paper as to the desirability of making manure under cover were no doubt exceedingly good, but it must not be forgotten that it was not always possible to get the manure in certain portions of the farm where it was it likely to be wanted, and, therefore, it must be done when circumstances were favourable. There were many other admirable suggestions if they could be carried out, but he was sure it would be found impossible in practice. Mr. Fish had said that they ought to grow 30 tons per acre. Did they not, many of them, do their utmost and put their best energy to the wheel, and, notwithstanding, they could not grow 20?

Mr. BRAND asked if Mr. Fish would recommend deep cultivation to all descriptions of soil, and, in speaking of very deep cultivation, he recommended it for only one particular soil?

The CHAIRMAN suggested that Mr. Fish should reserve his answers to all questions until the close of the discussion.

Mr. T. P. HITCHCOCK characterised the paper after all as being very much the dream of an enthusiast, because he did not think it practicable to bring all the suggestions—very excellent no doubt they were—into practical working. Allusion had been made to Lord Leicester, who had said that the land was not more than half cultivated. He (Mr. Hitchcock) entirely differed from that statement, believing it was made pretty well the most of, in this part of the country at all events. The farmers here therefore did not altogether recognise the arguments based upon such an assertion as that. The argument also hinged upon what had been called the bad condition of the labourer, the poor cottages in which he lived, the half-starved condition in which he existed, but the agriculturists of this neighbourhood did not recognise such a state of things in their midst, the labourers here, for the most part, being fairly paid, well housed, well fed, and tolerably well clothed. He did not know what might be the state of things in Norfolk; but if they were such as had been described, the farmers on Lord Leicester's estate must be in a great measure responsible for it. Mr. Fish had also made allusion to the sleeping partner in the land. That was intended as a rather awkward hit at the landlord. He (Mr. Hitchcock) did not think the sleeping partner had, after all, much to complain of, nor had the working partner in this part of the country, the landlords and the tenants being pretty well able to keep even with each other. Mr. Fish, in his admirable paper, had given a statement showing the value of the different feeding stuffs, as applied to the manure. He (Mr. Hitchcock) should very much like to know how that was arrived at. It might be stupidity on his part, but he confessed he could not exactly understand how that was done. There might be something very rich in the different manures; but how was it known that the animals were doing just as much on one article of food as on the other? It was said that cotton cake was worth so much, locusts so much, &c., but how was it known that in passing through the animal as much had been taken from the cotton cake, for instance, in proportion as it ought to do. The suggestions with regard to the decomposition of manures were very important. How was it to be done? If it was in the yard under cover, it would be just as it dropped from the animal. The decomposition must be done on the manure heap, and then came the question as to how it was to be protected from the rain in the winter and the sun in the summer. It ought doubtless to be under cover, but how was it possible to cover it? It could only be covered over with clay, but when there came a heavy rain the liquid would run from it. There were other difficulties in the way of adopting the suggestions that had been made, especially in the case of a field a mile or more off, to which the manure must be taken, not when you would perhaps, but when you could, and covered up, but still exposed to the wet and rain. As to the experiments mentioned by Mr. Fish as having been tried in boxes 3 feet square, it was impossible to tell what certain plants would do in a field, say, of 30 acres, from what they did in these small boxes. They might do to grow cucumbers in; but they would not do as experiments for growing large fields of wheat.

Mr. HUSTLER said that it would be making quite a revolution in farming to carry out all the suggestions which Mr. Fish had made. No doubt most of those suggestions were right if they could only be carried out. In the next generation landlords might see the advantage of providing their tenants with premises of the character referred to, but such a state of things did not exist at present, and therefore many of Mr. Fish's suggestions and arguments could not be brought to bear. It was impossible for any farmer to keep his manure in his yard until he required to use it. The farmer must cart it to different spots as circumstances admitted, and distribute it on the land when the suitable time arrived.

Mr. T. HITCHCOCK instanced the case of some model premises which had come under his observation. Every possible care was taken to carry the water away to prevent its getting upon the manure; in fact, the arrangements of the premises were what some gentlemen would consider perfect, but unfortunately it was found necessary to cart water and distribute it the greater part of the summer in order to get the manure down.

Mr. VINCE, sen. (Brent Eleigh), said that a great deal of what Mr. Fish had advanced was mere matter of theory, They

as a Club were, however, much indebted to Mr. Fish for coming amongst them with such an elaborate paper, full of many excellent suggestions, if they could only be carried out; and for his own part he wished Mr. Fish could be induced to come into their locality and take a heavy land farm of 300 or 400 acres, and show them what was to be done by farming on the system he had so ably propounded. He (Mr. Vince) and others always did their best. With regard to the manure question, in reference to which so much had been said, Mr. J. Wiggins, of Ipswich, in the course of a lecture he delivered in connection with this Club, treating on the subject of chemical action of manures, was asked what effect the weather had upon manure when carted during a frost, and he said, "None at all." But the gentleman who asked the question added, "I am afraid sometimes that the gases of the muck are escaping on to my neighbour's farm," but Mr. Wiggins said the land was acting upon the manure and taking the goodness out of it. Therefore this was quite an instance in which the question might be asked, "When doctors disagree who shall decide?"

Mr. PORTER expressed his opinion that the Club ought to hesitate before condemning the suggestions which had been made as impracticable, and that there was yet a great deal to be done before we could get out of the land all that it was capable of producing.

Mr. W. BAKER (Melford), after observing that he thought a great deal of what Mr. Fish had said would not be found to work in practice, proceeded to speak at some length on the subject of deep tillage, and advanced several arguments with the view of showing whether it was not possible, after all, that the result would not pay for the extra labour used in preparing the land. If in the end it was found that it would not pay for the extra outlay, it was nothing else than a complete loss of force. Referring to the subject of drainage, he contended that it was possible in dry seasons to take too much water out of the soil; or, in other words, over-drainage might, under certain circumstances, be a disadvantage. There was no doubt much land in this country if it had never been drained would never want it; and, in his opinion, there was a great deal of land which had been much deteriorated in consequence of the drainage. He did not contend, of course, that in the general result such was the case, but he believed there was much land which, if it had been properly worked, would never have required to be drained at all. He was not himself a strong advocate for cultivating to a very great depth. According to his idea, a fair depth for most of the soils was all that was necessary. He did not doubt but that many persons who had gone to the expense of clearing out the subsoil had found that it had been to the detriment of their pockets, as well as their crops.

Mr. FISH: What do you call a fair depth?

Mr. BAKER said he thought eight to ten inches was a fair average depth, but he knew a farmer who never ploughed more than five or six inches deep, and on the whole he had as good crops as any man certainly within twenty miles. It was very heavy land, and he never made an acre of clean fallow. This same individual had tried deep cultivation since, and it was quite a question whether his pockets had been subsequently so well lined.

Mr. R. EDGAR said there were some suggestions in the paper which occurred to him as being, to say the least of it, somewhat curious. Mr. Fish had spoken of a double produce. If that gentleman would go to his (Mr. Edgar's), and show him how to do it, he should be quite ready to pay him a handsome salary. He could not help thinking, however, that Mr. Fish was fast coming down to their own level. Last year, when he favoured the Club with a paper, he put the produce per acre at 50 tons, but now he had come down to 25, and probably, if they had the pleasure of meeting him here this time next year, he would have to come to their average, which was about 12½ tons. Still, he (Mr. Edgar) hoped they might be able to effect some improvement. Science had done much for them as farmers in the past, and he hoped they might be found willing to take advantage of anything that science might do for them in the future.

The CHAIRMAN said he was by no means so enthusiastic in regard to deep cultivation as he was formerly. He was much more sanguine as to the benefits of deep cultivation until he tried it. He might say that in every instance in which he had tried very deep cultivation he had seen no good results. This

year he subsoiled five rods and skipped ten, and he would defy anyone to tell him when the beetroot was on the land which was subsoiled and which was not. In his opinion, the roots of plants would go through anything. It might be that there was a particular soil adapted for deep cultivation. Possibly, in the experiments he had made he had not hit upon the right soil. Perhaps others would try the experiment, for it was easy enough to subsoil a few rods for mangold and see what the effects were. Reference had been made to the landlords and the land agents. He thought that as far as his brother land agents were concerned, they were always ready to give plenty of liberty to good farming. On the other hand, they were particular with a bad farmer, and very rightly so. As to the figures Mr. Fish had quoted in reference to the value of manure from feeding stuffs, he (the Chairman) wished he could believe all that was said, and he must congratulate Mr. Fish on having got some one's else authority on that subject, because no doubt the figures were very wide of the mark. If a half-sized animal had, say, one pound of cake per day, the value of the manurial droppings of that animal was comparatively small, but in the case of another animal which had 12 lbs., it was certain that that animal did not want all that quantity, and the consequence was that that which passed through this bullock would be much richer than in the case of the other bullock. Speaking generally on the subject, the manure heaps would, in consequence of their exceedingly dry state, be found to take a great deal of moisture up before it escaped. In his opinion, good must result to them as agriculturists from gentlemen coming amongst them and telling them what they should endeavour to obtain. Landlords were much more likely to listen to what was said by outsiders than by the farmers themselves. He did not find fault with the clause in the leases granted by Lord Leicester having reference to carrying out drainage at five per cent. If he (the Chairman) could get his land drained at five per cent. he would rather have it done so than do it himself. It must be remembered that the work would not last for ever, and five per cent. was but a small percentage. He was not a believer in the over-drainage of arable land, but, at the same time, he had seen boggy pastures and poor pastures that would, in his opinion, have done better if they had been less drained—that was to say, if the water had been kept a little nearer to the surface. With reference to the effect of dry weather on land, it was a well-known fact that well drained land did not suffer so much in very dry, hot weather as land that was not drained, the latter being liable to crack very greatly.

Mr. FISH then replied: With reference to deep cultivation,

he had practised it for years, and he had gone to the depth of four feet, and found it to answer; in fact, it answered so well for gardens that gardeners could afford to pay ten times the rent that farmers did. It was chiefly deep cultivation that enabled the gardener to pay his rent. It very often did not answer at first, as the Chairman had said, but that gentleman had not given any information as to how he treated the land in the course of the experiments he had made. Perhaps he treated the land just as he had done before, or perhaps he did not give it half enough manure to make it productive. In many cases the land was treated in just the same manner it was before deep cultivation was tried, forgetting that the process had liberated a great deal of fertility, and, therefore, because the corn was laid low they were dissatisfied, and condemned the system.

The CHAIRMAN: My beet-root did not get laid.

Mr. FISH said that this was not the character of year to bring out the merits of deep cultivation. When the soil was dry was the time to test the matter. He recommended deep cultivation on all land, but he did not advocate violent changes. It was better to treat the earth they had got rightly before they went down for more of its treasures. He confessed that he was an enthusiastic cultivator of the soil; he knew, he might say, as much about the earth as they did, he had worked upon it as long as they had, and tested it in more ways than they had, and he certainly could not understand why objections should be taken to the experiments in boxes. How had all past experiments been tried? and how was it that they were able to farm better now than they did 100 years ago? It was mainly owing to experiments of this kind. He would urge them to go deeper into the earth and save their muck. They could go deeper if they would, and they could take greater care of their muck if they would. It was perfectly idle to contend to the contrary. He asked if ever artificial manures were left in the rain? They would never get their covered sheds if they came to meetings like this and said it was all nonsense and impracticable. In conclusion his opinion was that the earth was capable of producing very much more than it did now; he pointed out that there was more moisture in drained land in hot weather than in un-drained land, and he said his estimate of the produce of the land had always been 25 to 30 tons per acre, and he quite believed they would soon grow it.

A vote of thanks was passed to Mr. Fish for his paper, and a similar vote having been passed to Mr. Biddell, the business of the evening terminated.

LAND AGREEMENTS.

At the February meeting of the East Riding Chamber of Agriculture at Beverley, Mr. C. Sykes, M.P., the president in the chair, Mr. BAINTON read the following paper:

The subject I have the honour to introduce is that of Land Tenure, but more particularly with regard to the conditions for occupation. I am aware it is rather a sensitive subject to discuss, but I think if we do so in a proper spirit and feeling there can be no reasonable ground for offence to any one. I should have been glad if this association had comprised a larger number of land owners, in order to have taken a part in this discussion, along with the occupiers, whose interests are identical; for I believe there is no circumstance more calculated to affect and influence the welfare of agriculture than that of proper conditions in farm agreements. I think some of those which are prevalent in this part of the country may be changed, so as to mutually benefit owners and occupiers of land. The object of agreements, in my idea, should be to protect the property from injury, with such terms of security and liberty to the occupier to allow him to exercise his judgment in obtaining the greatest amount of produce from the soil, under certain conditions of outlay, sufficient to maintain its productive powers, thus enabling him to afford a higher rent for the land, and at the same time benefit both himself and the public. The general system of yearly occupancy, with six months' notice only to leave, is, I consider, insufficient time to afford reasonable protection to the capital of the occupier, or security to encourage his enterprise, and it is a condition of no service whatever to the owner. It would, I think, be some

improvement under this system, to have a nine months' instead of the six months' notice to leave, for this would give more time to the owner to select a successor, and the same to the occupier to obtain another farm, or prepare for the sale of his stock, &c., with less loss than the short notice often occasions him. The often specified system and conditions for cropping in agreements, without reference to the difference in soils, is simply ridiculous, and experience proves that there is no system, however good for a time, but requires an occasional change, which is beneficial to the occupier, and does no injury to the land, such course of change, I consider, should be exercised according to the discretion and judgment of the tenant. Then the covenants on leaving, for compensation for improvements and unexhausted outlay by the tenant in manures, &c., is very indefinite, and often imaginary, for all permanent improvements as a rule are made at the expense of the owner, or some consideration allowed for them. I think the manure applied to the lands for the off-going crop of corn, and the linseed-cake, or other cattle food consumed with the last year's straw (the manure from which should always belong to the tenant), and valued to his successor at the increased value from such consumption, little would then be left to be compensated for. Having made these observations, I will now suggest an outline of conditions, as an improvement for farm agreements, with the view of eliciting the opinion of this Chamber. I am well aware many members are more capable than myself to discuss this subject, and I hope there will be a full expression of opinion from them. First, I consider a certainty of tenure

for a moderate term is most essential, for which I would have short leases, from eight to ten years, with liberal conditions for cropping, so as to fully exercise his judgment, viz., to have permission to take two crops of white corn in succession after a fallow, or turnips and rape eaten off the ground the year previous, and the same crops from seeds depastured and manured, provided they were sown in the first crop of corn after a fallow, &c. Beans and peas I would allow to be sown at the discretion of the tenant. These conditions would give sufficient liberty to the occupier to make any advantageous changes of cropping the land he might think proper, which, with the security of a lease, would enable him to receive the full benefit therefrom. The yearly outlay in management, with these conditions, will require to be liberal to maintain the productive powers of the soil, for which purpose I would fix an amount of money, sufficient to be annually expended on the farm in either manures or cattle food as the tenant may think proper. I think it should be not less than 20s. per acre on strong lands, or 30s. per acre on light soils, to the extent of the acreage of arable land upon the farm. If a continuance of occupation was not arranged between the landlord and tenant two years previous to the expiration of the lease, then, during those last two years, I would allow one crop of white corn only to be taken after a fallow, or seeds depastured. The produce of manure upon the farm from the last year's straw should belong to the tenant, and be taken by his successor at a valuation, in the same manner as his following crop of corn, which on light soils should be one-fourth, and on strong land one-third of the arable land of the farm from fallow, &c., or seeds depastured the year previous. The terms for payment of rent, keeping the buildings, gates, fences, ditches, &c., in condition, and the arrangements for sowing clover seeds, and time of entry for ploughing, should be the ordinary conditions for that purpose. This is the general outline of conditions for farm agreements I have to submit for discussion. There are a few other matters I will briefly name, viz.: The question of game, which is generally reserved to the landlord. When the land is let at a fair value, it seems both unfair and unreasonable to preserve the game to such an extent as to injure the occupier. I am of opinion a sufficient quantity for sport would always be maintained by the tenant, when he was aware that it would give pleasure to his landlord by doing so, and in which, I think, he should to some extent participate. Another subject I will also name, which requires attention, and that is the condition of labourers' cottages. Many of them are not only devoid of decent accommodation, but inconveniently situated. I consider it is a duty incumbent upon owners of property to provide suitable dwellings for the labourers (which may be built at a moderate outlay), for without decency and comfort in their homes, it cannot be expected they will derive much benefit from religion and the educational teaching which is now provided for them. I trust I shall not be considered too critical in doubting the universal benefit of merging small farms into large holdings, which is now general on many estates. No doubt, in some situations, where the soil is light, they are the most profitable. On small farms the breeding and rearing of stock, poultry, and the dairy productions are considerable and profitable, from receiving the personal care of the tenant and his family, which, on large farms, is but little attended to, and from the breeding grounds being thus lessened, I attribute to some extent the present scarcity of cattle. These small buildings are also desirable as stepping points for the industrious man to raise himself, which larger holdings do not afford him.

In reply to Mr. Dixon (Eske) Mr. BAINTON said he thought that an eight or ten years' lease would give a man the benefit of cropping.

Mr. DIXON said that if a man entered upon a farm with an eight years' lease, and left it at the expiration of that time he would be mending it for the first three years and robbing it the next five. He would not take an eight years' lease at any price.

Mr. G. W. LANGDALE (Leonfield) thought they ought to be careful as to the way in which they treated the question, it being one which affected both owners and occupiers of the soil. There was an absurdity in having one kind of manning and cropping for all varieties of soils. He did not consider that any one kind of agreement could be produced on principle laid down that would stand for any length of time. They were creatures of circumstances, and if they laid down a plan to suit one year, they could not say they could carry it out for

a dozen years. He did not think that a six months' notice was any protection to a farmer, for he was at the mercy of his landlord at any time. Security of tenure he considered to be a national question, and not one simply for the landlords or tenants, for if better protection was given the productiveness of the land would be increased. He did not find fault with the landlords of Yorkshire. The tenants were glad to meet them, and they must not forget too that they had half the bargain-making when they took their farms. In his opinion more money would be invested in land if the tenants had better security.

Mr. J. W. CLARK (Bentley) agreed in many respects with Mr. Bainton's paper, but not in others. He thought fifteen or sixteen years' leases would be better than those for eight or ten years. They certainly wanted something better than year to year tenancies. He thought leases should be saleable, and that as there was a commercial value upon unexpired leases, the tenant or his executors should have the benefit of it, and not, as at present, lose all interest, if removed by death or otherwise. There should, in his opinion, be a compensation. He did not agree with the leases of the Earl of Leicester, which were for twenty years, and granted on these conditions, that if a tenant left a few years before the lease was expired he should receive a compensation, but that he should receive none if he stayed all his time. Such a lease was an inducement for a man to rob the land before he left it.

Mr. J. CRUST (Catwick) said that under many agreements farmers might crop as they liked, and this was found to be the best plan. The most desirable thing in his opinion was a twelve months' notice with a good tenant right. He believed the majority of tenants in the East Riding would be opposed to leases, and that if they had twelve months' notice with a good tenant right, good farming would be the result. He hoped that landlords would see that the tenants wanted only what was fair and reasonable.

Mr. NORFOLK in reply to certain remarks which Mr. Crust had made on cotton lords and their leases, said that the cotton lords had taken what the aristocracy had left undone and enriched the land. This had been particularly observable in Ireland, where the cotton lords bought land, erected mills, and caused thriving populations to spring up, which the aristocracy had failed to do.

Mr. RILEY agreed with the remarks of Mr. Crust, and said he did not think he would take a farm with a lease. Alterations, in his opinion, were required in the matter of game and the labourers' dwellings.

Mr. DIXON thought that landlords should pay poor rates on game, and then it would decrease.

Mr. LANGDALE did not think it just that a farmer should not be compensated for any marling he might do, which was an inexhaustible improvement. He (the speaker) thought it would be best if the discussion was postponed, and he proposed that it be adjourned till the next meeting.

The PRESIDENT seconded the adjournment, and observed that, being a landlord, and having been brought up amongst landlords, he had heard remarks which had surprised him. He did not believe that leases would benefit anyone, but, on the other hand, they would interfere with the relations of society, as they at present existed. With regard to agreements he did not believe in them. He had none on his farms in Holderness, but left it to the tenants. This, he thought, was much the best plan, for it would be found that tenants, under such circumstances, would do what was most likely to promote both their own and their landlord's interests.

Mr. R. WHITEING (Beverley Parks) said the question was such a delicate one that none of them would go into it. If the chairman would only stop until the reporters had gone he would then hear something. None of the speakers dare go into the matter but himself (laughter). He had neither lease nor agreement, and just did as he liked, so long as he paid his rent. In a discussion like this they should go fully into the subject, and not treat it by a side wind. He knew many tenants were oppressed with game, but they would not say so. The discussion ought to be adjourned, and then taken up in a straightforward manner.

Mr. J. CRUST then proposed a vote of thanks to the Chairman, who he said had attended every meeting of the Chamber since he was elected; and Mr. Bainton seconded the proposition.

The PRESIDENT said he was afraid that it would be the last meeting he should attend for some months, as he had to go to London.

MONMOUTHSHIRE CHAMBER OF AGRICULTURE.

The general annual meeting was held at Usk. Mr. A. D. Berrington in the chair. By the annual report it appeared that while the income on paper is sufficient, and the estimated balance considerable, the subscriptions are very seriously in arrear.

The CHAIRMAN read the report of the Committee appointed by the Monmouthshire Chamber of Agriculture to consider the question of Compensation to out-going tenants for unexhausted improvements: Your committee have fully considered the question referred to them, and they desire to record their sense of the clearness and ability with which Mr. Fletcher has treated it. They are, however, of opinion that it would not be in the power of the Chamber to adopt his suggestion of establishing a custom on the subject which should have the force of law; and that even if this were practicable it would neither be desirable nor fair towards the landlords. They have, therefore, with a view of carrying out their instructions drawn up certain clauses, the provisions of which they consider equitable in cases where high farming prevails; and which they think might probably be gradually adopted as a whole, or in part, in the agreements of many estates. They wish it, however, to be actually understood that in doing so they have no desire to dictate to any landowners the course they should pursue, but merely to record in a convenient form their opinion of the relative values of different unexhausted improvements. The clauses are founded to some extent on the prize essay of the Royal Agricultural Society, published in the journal for 1868. For the out-going tenants to be allowed—1. For all limes and undissolved bones used on the arable land in the last year of the tenancy, one-half the cost, and for that used in the last year but one, one-fourth the cost. 2. For all cake or corn consumed, or Peruvian guano, superphosphate of lime, or other soluble manure (not being nitrogenous) used in the arable land in the last year of the tenancy one-third of the cost. 3. For undissolved bones applied to meadows or permanent pastures the full cost, less one-eighth part for each year since such application. The above three clauses are not to exclude the manures or feeding stuffs purchased with the proceeds of hay, straw, or roots sold under any agreement with the landlord. 4. For all drainage executed in a permanent manner (provided it is done with the written sanction of the landlord) on delivering a plan of the drains and outfall, and an accurate account of the cost, the full cost less one-fourteenth part for each full year since such draining was done. 5. For new quickest fences made with the written consent of the landlord—the same having been kept clean and well taken care of—the full original cost, less one-tenth part for each full year since the planting. 6. For healthy fruit trees planted within seven years, with the written consent of the landlord, and properly preserved, the full cost price. 7. For new buildings, if erected in a substantial and permanent manner, and with the written consent of the landlord, the full cost less one-twentieth part for each full year since the work was done.

A. D. BERRINGTON, Chairman.

It was decided that this report should be printed and circulated.

Mr. Charles Lewis, of St. Pierre, was elected president for the ensuing year.

At the dinner, Mr. THOMAS WILLIAMS called attention to the existing laws relating to contagious diseases amongst sheep and cattle. He thought it was a great shame that the country should be put to the expense of paying veterinary surgeons to ride about for the purpose of inspecting a handful of sheep which had been touched with the shab. The police he thought might do the duty just as well. The only objection which had been made to the police inspecting the sheep was that the police would not know the shab when they saw it. But he would stake any amount that he would teach any policeman in five minutes to know it at once.

Mr. RELPH: Will you open a school if Major Herbert will send his men.

Major HERBERT: If Mr. Williams will undertake to teach the men what shab is, I will send them. He would, however,

relate a little circumstance which occurred a short time ago which Mr. Williams might remember. Twelve months ago the veterinary inspector told a policeman that some sheep with the shab were in the market. The policeman went to the market and forbade the removal of the sheep. The owner said that the sheep were not affected with shab. The inspector maintained that they were. The police constable did not know what to do, and he (Major Herbert) was sent for. Now he (Major Herbert) did not pretend to be an expert in shab, but as he happened to be in his office he went down to the market. He saw two or three experienced farmers, and amongst them Mr. Williams' brother, and he asked them to tell him, as a friend, if the sheep were shabby or not. They went into the pen and came out again and told him that the sheep had had not got the shab. There was a case in which the veterinary surgeon and the most experienced farmers disagreed upon the subject. What then could be expected of a policeman.

Mr. WILLIAMS: You are coming round to my argument I can see, I say that I know the shab better than anyone else, and I could teach any policeman.

Major HERBERT: I will not go back from my word. If Mr. Williams will undertake to teach the men, I will undertake to send them. At present the policemen did all the hard work. They had to go once a week to every farmer. But with regard to contagious diseases generally he might add this, that he considered it sheer nonsense for the rules of the Contagious Diseases Act to be applied to a disease like shab. Unfortunately the officials of the Government had probably not seen a shabby sheep and had probably no idea what it was like. They would have some idea that it was something like the cattle plague. He did not know whether he was out of place in doing so, but he would suggest that the Chamber memorialise the Government to place the rules with regard to shab on the same footing as the rules for foot-and-mouth disease which had been relaxed. The inspectors' duties will be reduced to a great degree in that disease, and he did not see why it should not be the same with regard to the shab. Therefore he thought they should direct their attention to this point.

Mr. JONES (Trostrey) asked whether it would be better if they had the Act and struck out the obnoxious clauses?

Major HERBERT reminded Mr. Jones that if they had the Act it would take them some hours to understand it. They would not only want the Act, but the Privy Council orders as well, and they would have one of these orders about once a month.

Mr. T. WILLIAMS remarked that all he could say was that their money was being thrown away uselessly. If a sheep was seen with a bit of wool off or a scratch on it, it was said that the sheep had the shab. He thought it was a great shame that their money should go towards keeping up these fine gentlemen who did nothing but ride their horses about the country. It was, in fact, almost dangerous to walk along the roads.

Major HERBERT said that he might explain that for the future the farmer would report to a policeman when his cattle were infected with the foot-and-mouth disease. The policeman would report to the veterinary surgeon, who would go and examine them; then when the farm was cleared of the disease the farmer would again send for the inspector, who would attend and, if justifiable, give him a clean bill of health. So that two visits will suffice for the future, instead of some eighteen or twenty as hitherto, for the purpose of making up the magistrate's return. The rules affecting shab in sheep had not been altered, and the inspector was bound to make his visits for that disease as heretofore; therefore he argued that the best way they could bend their energies would be towards getting the rules applicable to shabby sheep altered in conformity with those affecting the foot-and-mouth disease.

Mr. JONES (Trostrey) quite agreed with Major Herbert. He had a few sheep affected with the disease, and the inspector came to his home once a week. He could not see the use of this, and he gave the man his word of honour that he would

not remove them. But he was informed that it was according to the Act, and that the inspector was bound to come, and he did come. Then, again, there were three farms adjoining affected with the disease, and the inspector visited them on the same round; but he would charge the mileage for them as separate items. He certainly did not think it was fair that the farmers' money should be spent in such a useless manner.

Major HERBERT said that it must be borne in mind that it was not the inspectors or the police who made the rules; therefore any blame to be made would have to be made to the Privy Council, and not to those who simply carried out appointments they had undertaken. He held it to be absurd that the same rules should apply to shab in sheep as to the foot-and-mouth plague, and that was what had induced him to make the suggestion he had. He now begged to propose that they should memorialise the Government to relax the rules with regard to shab in sheep.

Mr. G. A. G. RELPH had pleasure in seconding this proposition. He would go even further than Major Herbert, for he would not have inspectors except in the markets, either for foot-and-mouth disease or for sheep. The foot-and-mouth disease was supposed to have been imported into this country. It broke out in 1839 or 1840, long before a foreign beast ever set foot in England, so that it was a native disease, originally, at any rate. Then, again, he thought it was most unjust and unfair that they should have a visitor coming to their home-steads except for such virulent diseases as the cattle plague. The interests of the farmer were such as to prevent them doing anything to break the rules by removing cattle or otherwise. They knew their duties to their neighbour better than that. But he would have strict watch put at every gate of the markets to watch every beast that went in; and where an exception occurred in which a farmer so far forgot his public duties and dishonoured himself by bringing affected cattle into the market he would have a very heavy penalty inflicted. He would not spare anyone who knowingly brought affected cattle into the market, but he would punish them severely. He begged to second the resolution that the Chamber memorialise the Privy Council to put shab on the same footing as foot-and-mouth disease; but at the same time he would rather have no home visitor whatever.

Mr. HAYCOCK thought that it would be as well to have police inspectors at every gate of the market to inspect the cattle coming in. And when anyone was found guilty of knowingly offending the law to punish him heavily. There was a great deal of personal feeling engendered by having inspectors to their homes.

The CHAIRMAN concurred in the motion that sheep should be put on the same footing as cattle. But in the present state of the law the inspectors were obliged to visit once a week. So long as that continued the expenses would not be reduced.

A VOICE: Let us also pension the inspectors.

The motion being put to the meeting was carried unanimously.

Mr. CULVERWELL proceeded to read the following paper on the Condition of the Agricultural Labourer: Being one day much annoyed by the work not going on satisfactorily, I sat down in the evening and thought Why and what is the cause of the labouring class becoming so troublesome? and, as I thought, I wrote my ideas, feeling it would be much easier and less irksome to my audience than attempting a speech to read them from paper; and with the permission of the chairman, and the kind indulgence of my brother farmers, I will lay before this Chamber a matter that is becoming quite a serious question to agriculturists, and I shall be happy to hear other members discuss it; and, if approved, of some one more able than myself forming a resolution that will go forth unanimously from this Chamber to the benefit of landlord, tenant, and labourer. This subject is the present difficulty of having and managing, or getting a better class of, farm labourers, men who would take some interest in their employers' business. I am sorry to say publicly, from my own experience, and also from information received from other farmers, the labourers' interest is to get as much wages as possible, and do as little labour in return as they can, and they will not believe or feel they should make themselves worthy of their hire. I contend that a farmer should get some return for the money that he daily expends on labour, for if he pays

his man 2s. per diem and he only earns 1s. or only 1s. worth of labour he is certainly robbing his employers. I do not wish to drive the labourer as a slave, but most of us know what is a fair day's work, and have a perfect right to demand it; and we should expect of our men that they should feel themselves as one of the main wheels of the farm, and think and act for the benefit of the master who employs them, whereas they are now merely (I can't compare them to anything else) mechanically-moving figures, never caring or thinking how they may assist the master by taking a slight interest in his welfare, the doing of which would render his business more easily managed, his property better cared for, and establish a kinder and more grateful feeling, and add much to the benefit and happiness of employed and employer. Then comes the question, What is the cause? I cannot believe it to be entirely from ignorance, and I have no doubt many here, much older than myself, both in business and years, will say it never used to be so. I never had one tittle the difficulty I have now, and I pay much higher wages, and where only one used to be able to read and write twenty can now, and under the Compulsory Education Act the labourer's child will be better educated than I can afford to educate mine, because I have to pay higher rent, treble the taxes, and higher wages for less work. It may be in this district from the nearness of mines and ironworks, also from emigration, that there is a scarcity of hands. Another cause is from the want of unity characteristic of farmers. Men are becoming careless of possessing what every man should value as dearly almost as life, viz., his character. And why? Because we, by our supineness, have allowed it to become so. If a man is discharged for drunkenness, neglect, or misdemeanour, the next neighbour wanting a man employs him, not caring to inquire, or hardly asking him for his character. Thus he becomes indifferent to what should be invaluable to everyone, both for the present and the future. In this matter we, as farmers, are morally responsible for a certain amount of crime and degradation that helps to fill our gaols and unions; for when once a person begins to sink he too often gets deeper and deeper in the mire of wickedness; then the results—the gaol, sometimes the gallows, because he has been allowed to be careless of a character. Then another great cause. The responsibility here must fall on whom it belongs. It is not the poor man nor the farmer, it is the first men of the realm, the landlords of England. Let us imagine ourselves walking about the different farms and parishes. Let us have a look at what every man should feel a delight in—his home. What do we see? Horrid hovels. House or cottage is too dignified a term for them. They are dens of filth, where vice and immorality are engendered, not fit habitations for animals of the lowest order, and yet families—human souls—must live therein, maybe all sleep in one room for the want of more, or that the roof has fallen in over the other, men and women, boys and girls, altogether. The picture wants no more painting, the dark tints are too familiar with us all. Who is to blame here? Compulsory cottages would raise the poor man quite as much, if not more, in the social scale, than compulsory education. We the occupiers, have to pay for the latter. There is no compulsion on the landlord for the former. Is it consistent that education and such homes should be together? Do the landed proprietors wish to drive the respectable labourer out of the country? If so, let the cottage be neglected and fall to ruin; let them tumble down about the occupants. Then they must go, and this, I may venture to assert, is almost a common occurrence. Now for the remedy. As I have mentioned what in my humble opinion are the causes, they of themselves will suggest the remedies. Then let us, the members of this Chamber, urge upon the landlords to see that every farm has its certain number of cottages. That they will be conducive to the good of every one is a moral certainty. I will not believe that cottagers would not pay a fair per-centage on capital invested. If by those causes previously mentioned, labour in this district is become scarce, higher wages and good houses would be an inducement, and labour could and would be imported. Many counties pay much lower wages than we do. I would suggest that two cottages, or say a double cottage, should be built for every 150 acres, with suitable gardens, and that when built should become, with a proper per-centage, the tenant's, as part of his holding, he being responsible for the rent; that they should be built as cheaply as would be

consistent with durability and comfort, and have not less than three sleeping apartments, so that the rent may be estimated accordingly. That the farmer should hold out certain inducements to his men, such as giving them potato-ground in addition to the wages, such to be forfeited by misconduct, and should also sell them wheat at first cost for their bread; in fact, give them opportunities that would be consistent with his means. I maintain that all these matters would establish a good feeling between them. Business would become a pleasure, whereas now it is almost unbearable. Land would increase in value by being better cultivated. The landlord would benefit by that; the tenant by the easier and improved management of the land; the labourer by constant employment in his work, his decent and comfortable home, garden, and perquisites. What is there in creation insensible to comfort? Do we not all know how to appreciate a comfortable home when tossed and worn in body and mind? Is it not a blessing? Then are not our labourers the same flesh and blood? Then why should they not have houses that would render them happy? Is it reasonable that a man should walk his mile or two to his work—often the case—work all day on his crust of bread; then, tired and worn, retrace his steps to his hovel, damp, dirty, no glass in the windows, not fit flooring, delicate wife, sickly family, and misery supreme? All this should not be, ought not to be. Let this Chamber urge it upon their landlords. It is their duty. Their life is one of plenty and luxury. Let them look at it financially. It is not a losing speculation. Would there not be great remuneration in having risen families in the social scale—that comfort and happiness reigns where misery and squalor before abounded? Is there not much pleasure in feeling that good has been done? Unless something is done, farms cannot be managed. They cannot be worked without labour, and that is not to be had. I will now come to the farmers. The cause here also suggests the remedy. Let us become a more united class. Let us by united and good feeling abolish selfishness, and try and teach by precept and practice the value of truth, duty, and sobriety, and let us be determined and insist upon having and giving characters. It is incumbent on us for the benefit of society. It will and must work much good in time. If a man can better himself, it is his province to do so. If deserving, it is our part to help him. It is a duty we owe one another to help each other. I believe we can all mutually assist, and by so doing benefit ourselves and the community at large. I have not had time to collect as much information as I should wish, and will invite, in conclusion, my brother-farmers to give us now their views on the subject. I beg to move the following resolution: “That inasmuch as we, the members of this Chamber, find to our loss that the difficulty of obtaining labour is every day becoming more serious, and that it is a great detriment to the proper and reasonable cultivation of the soil, they do most earnestly urge the landlords of the county to build labourers’ cottages where required, believing that such accommodation will remove this difficulty of obtaining labour, and will be the means, socially and morally, of improving the condition of the labourer, and add to the better cultivation of the soil, and consequently increase the value of the land.”

Mr. JOHN MORGAN said that he did not think any member could have brought forward a subject of greater importance than the advisability of building better habitations for the agricultural population, those at present in existence being, generally speaking, a disgrace, not only to the landlords but to the farmers, and calculated to have a tendency to demoralise the agricultural population very considerably. In consequence of the inducements which were offered them, the labouring population were now leaving for the manufacturing districts, and resorting to emigration, and he therefore thought that the subject treated of by Mr. Culverwell was a most important one, and of great interest to the landlords, the farmers, and to the country at large. He hoped that the matter would be placed before the landlords of the country in such a shape that it would command their attention, for it was clear that if the best labour left the country the soil would be badly tilled, to the loss of all classes. He thought that the agricultural labourer was, strictly speaking, the most important man in the world, as he conducted chiefly to the welfare of his fellow men, and he thought it was a discredit to the country that the class had for so long been so greatly neglected. He also thought that the heavy taxes upon cottages were a great detri-

ment to the investors of capital in that kind of property. And why the proprietors of railway property and similar investors should escape contributing to the maintenance of the institutions of society, and cottage property should pay something like 16 per cent. he could not understand. There was no excuse or palliation for such a state of things. The return to investors in cottage property was most wretched. He had a few cottages at Pontypool, and got nothing from them. He would never think of investing in cottage property in towns whilst the tax upon them was so heavy, but in the country districts he thought it was to the interests of all classes to improve the dwellings of the labouring population, looking at the matter from a social point of view, and setting aside the question of returns for invested capital. He had great pleasure in seconding the resolution.

Mr. GREENTOW-RELPH said the paper read by Mr. Culverwell appeared to touch upon two points—the position of the farmer with regard to the agricultural labourer at the present time and in the future. He thought that no subject could be more interesting to those present, and Mr. Culverwell had said very truly that, whilst farmers were willing to take on a man who had been turned away from his previous situation on account of drunken habits, there was no inducement for a man to try and obtain a good character. It might be said that if they waited for a man with a good character they would have to wait a long time, as the labourers were always changing places; but he held that employers of labour were acting contrary to their own good judgment in engaging a hand who came unprovided with a good character. However, considering the exigencies of many farmers on certain occasions, he did not blame them so much for being less particular in their choice of workmen than they should be, as he should otherwise be inclined to do. But they could not close their eyes to what was going on in the labour market, and there was no doubt that in the course of time the agricultural labourers would follow the example of artisans in the manufacturing districts, and ask for a reduction in the hours of labour conjointly with an increase of wages. It behoved them, therefore, to take council together to avert the inevitable demand that would be made as well as they possibly could. He certainly sympathised with the labourer in his present long hours of daily toil, and said that they could not condemn the man for stepping into the clean and well-kept public-house on his return to a home at night that contrasted most unfavourably with the comfort the tavern afforded. Yet, if the step proposed by Mr. Culverwell with regard to the erection of cottages were carried into effect, the temptation would be withdrawn to a very great extent; for with comfortable dwellings there would be some inducement to the men to return to their families at the close of the day’s work. Why did the agricultural labourers occupy their present degraded position? It was because they, and their parents before them, had been neglected, and had scarcely even been taught their religious duties, being left from generation to generation with almost entirely uncultivated minds. No doubt there was a better state of things in store for the agricultural labourer, but to raise him from his present state of degradation would entail expense, and even now school rates were being levied in various districts. Wherever introduced into the county of Monmouth, the farmers would of course have to bear these rates, and he believed that if they saw the money well expended in such a cause, they would contribute without grumbling. It was merely the ignorance of the agricultural labourers which had prevented them combining to forward their interests before; and it was to be hoped that the farmers would see their way to encourage the men by giving them better wages. He had heard a gentleman say that it did not pay to give his men less than 2s. 6d. a day; as the man who was paid that sum generally made himself worth it by doing two-and-sixpence worth of work, but he who received 1s. 8d. or 1s. 10d. often did not earn a shilling. He was sure that the men who received the highest wages would turn out the best in the end, and he hoped that the landed proprietors would lose no time in erecting cottages in the country for the labouring classes. He had no doubt that if the motion of Mr. Culverwell were passed, it would act most beneficially as a spur to the accomplishment of the proposed improvements.

Mr. HAYCOX said it should, in justice, be remembered that, though the ironmasters and other large employers of labour in manufactures might offer the agricultural labourers better

wages than they were getting at their ordinary work, they often, owing to the slackness of trade, were compelled to shut their doors, and send their workmen back to the agricultural districts; whereas the duties of an agricultural labourer were continuous, as the farmers could not close their fields, but they must maintain the cultivation of the soil at all times. He thought they might afford to give the labourers 1s. or 2s. per week more than they were receiving at present, as he thought the labourer worthy of his hire. It also appeared to him that it would be well for the Chamber to consider whether it would not be better to do away with part payment in cider.

Mr. CULVERWELL said it seemed to him that if they did away with cider as the staple drink they must do away with the orchards; and he maintained that a labourer could not afford to maintain his family without he received perquisites.

The PRESIDENT said he had always thought it the duty of

landlords to provide for the welfare of those who lived upon their property; and he thought that lauded proprietors ought to take the view of the question that there was still a great deal to be done in the way of improving the dwellings of the agricultural labourers. He quite agreed with the motion put forward by Mr. Culverwell, to whom he was much obliged for the manner in which he had entered into the matter, and he was also indebted to Mr. Thomas Williams for having introduced the subject of the Contagious Diseases Act.

Major HERBERT did not think there was a man who would not speak out openly and honestly, and say to the landlords that more cottages were wanted for the labourers.

Mr. CULVERWELL said he thought that if the landlords had been applied to openly before, additional cottages would have been built.

The motion of Mr. Culverwell was adopted.

THE MIDLAND FARMERS' CLUB.

At the eighth annual meeting at the Royal Hotel, Birmingham, Mr. George Wise in the chair, Mr. MORGAN EVANS read the following paper on two mottoes, *Practice with Science*, and *Work and Learn*:

I trust I shall be found sufficiently orthodox in my remarks, after having chosen as a title of my address the motto of the Royal Agricultural Society, *Practice with Science*, and also that of the old-established Bath and West of England Society, *Work and Learn*. I think the more we farm in harmony with these two mottoes, the more successful we shall be individually, and the greater will be the benefit to the nation from our agricultural. It would be impossible in one lecture or in a dozen to go over all the ground included in these wise old sayings. I have rather taken them as a starting point from which to address you than for the purpose of making any attempt at giving you an exhaustive textual discourse. Our present agricultural position has been attained by a slow gradual progress rather than by sudden leaps. Experiment and experience have led us where we are. The light of science, although a light from heaven, has not infrequently led us astray. The fault, though, is not in the nature of the light, which is bright and constant. We have not looked simply enough at the operations of Nature. We are rather pleased than otherwise to find out mysteries that practically do not concern us. We theorise when we should work, draw conclusions and preach on them, without putting them to the test in the open field. We dogmatise and delude agriculturists, and inoculate them with false views that will take a generation to eradicate. Some of these teachings have so infected the minds of our great landowners, that utterly absurd clauses are inserted in leases, thus cramping the operations of the tenant-farmer, who has to farm to order. The terms of some modern agreements appear to be made for the purpose of teaching a farmer his business. His course of cropping is laid down; he must grow only certain crops, and these not too often. The owner of the soil has little faith in his land, and no reliance in the farmer. If the soil requires such hedging around, it must be a very unstable article to deal with; and if the farmer is to be educated in his profession by lawyers and land agents, he is totally unfit to enter upon another man's property. If he has to farm by routine, half the pleasure of his occupation is, I think, gone. He is little better than a farm bailiff, and not his own master. Brains are a nuisance to him. I must not be meant to condemn honourable terms of agreement for mutual protection. These are necessary in all contracts, whether it be for a farm in the country or house in the town, a shop in New-street, Birmingham, or five hundred acres in the Lothians. Chemical science is an important auxiliary and an honourable handmaid to agriculture. If she has sometimes jilted us, jilting, after all, has been as much due to the stubbornness of the lover as to the caprices of the wooer. We shall ever be indebted to science for the impetus given to artificial manures. She has explained the *rationale* of their influence, and enables us to detect any adulterations in their composition. And the analysis of soils also plays an important part in modern farming, whereby we detect any great deficiency in lime, potash, phos-

phoric acid, or salt in our soils. The agricultural world is greatly indebted to the researches of scientific men. But it has not at all times happened that their investigations have had practical value to farmers. A great deal has been crude and misleading. The results obtained in the laboratory and the conclusions arrived at too hastily, have not been corroborated when put to the test of field experiment. The scientist who theorises and propounds his theories to the public without first proving his scientific views by genuine farm practice, is a dangerous leader. Besides the man of science is frequently above making correct calculations of how his theories will pay in working on an ordinary farm. For want of a knowledge of the business of farming, and the ordinary operations of commerce, he is not always a safe guide. Indeed a great deal of what were considered as axiomatic truths twenty years ago, have turned out to be utterly fallacious when reduced to practice. What appeared abstract truth in the laboratory vanished when brought to bear on the soil of our hills and valleys. Sun and shade, natural fertility, and the variation of our seasons in a changeable climate, had been overlooked and not taken into account. Thus much that was popular belief has proved to be the popular error. Truth may be immortal, but error has great vitality. When the great German chemist, Liebig, frightened us almost out of our senses by proclaiming the utter and inevitable ruin impending from our farm practices, and that England would in a few decades become utterly sterile from exhaustion of the mineral constituents of the soil, he did no little damage to British agriculture. Much that we have learnt from him and his school has to be unlearned, and the unlearning is a tedious process. Notwithstanding that Mr. Lawes has for many years demolished the bugbear of "exhaustion," the theory still underlies almost all the popular teachings of the day. Leases and farm agreements throughout the country still continue to be framed in accordance with the exploded doctrine. Landlords look on in consternation at the continuous croppings, or the removal of more than the usual produce of the farm. The cheese-factory system, amongst others has been condemned as ruinous, because the milk is sold, and there is no whey to feed the pigs with. Farming can only pay by selling farm produce. If butter and cheese are legitimate articles for sale, there need be little fear of exhausting the land just because there is no whey left. Surely, with all our resources in the way of manures, the damage, if any, can be repaired. The more we can sell off the land year by year with a profit, the greater we may rest assured that the natural fertility of the soil is uninjured, whether the produce be beef or milk, butter, cheese, or wheat. The farm is a machine, which if not fed at one end will not deliver at the other. A hundred of thatch at a guinea is well replaced by two hundred-weight of super-phosphate at 7s. per hundred-weight, and leaves besides a clear saving of 7s. to the farmer's pocket. I would not be supposed to argue that all of the straw can be removed from the farm without serious damage; for besides its value as fodder, and its manurial value in chemical constituents, it is a great vehicle for collecting other manure and retaining it in a portable form. And after all it said, there is no

manure to beat that of the farm-yard. And this leads me to mention another error on the part of analysts. It has been maintained that the value of farm-yard manure is simply equivalent to the money-value of its constituents as food for plants. Now some recent experiments by Mr. Lawes go to prove that farm-yard manure has virtues which do not enter into the calculations of the chemist. Its power of retaining moisture in the soil is one of its great advantages, especially in dry summers, and its merits in this way is to be considered when fixing its comparative price in relation to other manures. Again, chemists in days gone by had been loud in their protests of the wastefulness of spreading manure on the fields in autumn, averring that the loss in ammonia by so doing is costly and ruinous. But Dr. Voelcker now tells us that the custom of our forefathers is not only not injurious in practice, but positively to be recommended, and there appears little doubt that former teachings on the matter were devoid of truth, and illusory. Similar errors, originating with scientific theories, may be mentioned, but these few must for the present suffice. Since the latest revival of agricultural chemistry, now upwards of a quarter-of-a-century, much good work has been done; but it must be allowed that the expectations formed of the benefits to be derived from chemistry have not been fully realized. It was at one time supposed that one had only to learn chemistry to become a successful farmer—that immense changes would take place in farm practice; it was even thought that all that was necessary to grow crops was to get the soils of the different fields analyzed, and that the chemist would compound a manure to suit the land with as great ease as the physician prescribes the ingredients of a drastic bolus, or diuretic draught. Such absurd teachings are even now not wholly unknown. In some provincial districts the tribe of minor chemists are found on the platform at farmers' clubs, lecturing farmers on chemistry, and propounding absurd dogmas and chimerical theories, to the utter dismay of all who understand anything of practical farming. I would not say one word against the honourable professors of chemical science, but there is much to be said against an incompetent class of teachers, who dispense epsom salts by day, and turn their back parlours into so-called laboratories at night, and who have no other claim to be heard by practical men. Some of these would find it extremely difficult to raise a good bed of leeks in a kitchen-garden, and still think themselves fit to instruct others in growing broad acres of turnips and wheat. Not very long ago, on the other side of the Tweed, one of these self-constituted teachers urged the necessity of every farmer having the soil of each field annually analyzed—of course by him—and that it was the only way to farm properly in accordance with the enlightened spirit of modern times. Utterly opposed to such unpractical theories are the teachings of men like Mr. J. B. Lawes and Dr. Augustus Voelcker. There are so many conditions that cannot be taken into account in the chemist's determinations; and the fertility of a soil in practical working cannot at all times be diagnosed by the aid of chemical tests. There are the mechanical texture of the soil, the crops previously grown which influence the friability or firmness of the soil as a seed-bed, the changes likely to take place by the action of the climate—heat and cold, sunshine and rain. Besides, we know that a few hundred-weights of nitrate of soda or sulphate of ammonia sown over an acre of ground containing hundreds of tons of soil turned over by the plough will sometimes double the quantity of wheat, whilst a sample of the soil taken from the surface to say ten inches deep, and thoroughly mixed, would not contain any perceptible trace of the manure used, or in any way foretell the probability of its raising an abundant crop. Many of our chemists have been well versed in their own profession, but lamentably ignorant of the conditions of agricultural practice, the farm ledger, and the many puzzling questions which claim our attention when we come to manage a farm of five hundred acres. They have pocketed samples of the field as a builder would certify to a house from the nature of a brick brought to him. Pinches of soil under the torturing influence of acid and fire have told only half the secrets of the field. Instead of bringing the field into the laboratory, Dr. Voelcker, Mr. Lawes, Professor Way, and a few other eminent men, have, so to speak, taken the laboratory into the field. This is the only reliable way to obtain exact knowledge in the chemistry of the soil, and every line they have written is thus worth reading and eminently suggestive. Certainly the elaborate statistics of Rothamsted require much time and patience to master them.

and I could wish that a popular exposition of the chief points arrived at by Mr. Lawes were placed before the public. I may here be allowed to say a word on the numerous lectures delivered at our Farmers' Clubs on Science and Agriculture, Chemistry and Agriculture, &c. These are frequently the production of students in science, who have never held an acre of ground or fed a single porker. The nature of oxygen and hydrogen, carbon and nitrogen, are explained by the help of a few bottles and a spirit-lamp. The ingenious bottle-holders treat of elementary substances in a very elementary way. They take great pains to say they will lower their discourse so as to be easily comprehended by the farmers present. We hope farmers appreciate the infinite condensation of their oracular teachers. Now, really, farmers either do or do not understand the first principles of chemistry. If they do, it is great waste of time to have to listen to pedantic jargon, suitable only in the first pages of an agricultural primer. If they have not a rudimentary knowledge of the natural sciences, I am sure there is very little got out of a single lecture. What is to be gained in a one hour lecture on astronomy if we have to range from the Sun to Saturn? or a discourse of a like length on geology which shall include the history of granite and greenstone, trap and trilobite tertiary formations and alluvial deposits? Farmers of the present day are not supposed to be ignorant of the nature of simple gases, or of the course of plant life, and the general constituents of the soil, and of manure. If there are any who are ignorant, the wiser plan would be to get education elsewhere, and pay for it, and not stand in the way of those who have graduated in a higher class. It appears to me almost an insult to a respectable, intelligent class of men, that anyone should presume to drill them in the alphabet of a science of which few now-a-days are entirely ignorant. It does not appear to be at all indispensable to the farmer that he should thoroughly master chemistry, geology, or any other science. Putting aside for the present any consideration of the pleasures to be derived from following any particular branch of study—the benefits of mental discipline and culture attained by investigating the secret workings of Nature, or the intellectual and social status the student is able to assume amongst his fellows—there is not a great deal to be gained by simple book knowledge. Let the young farmer, before entering on a farm, learn the best way to plough, to sow, to reap. Let him study the climate, and the farm practice of successful agriculturists in the locality. He will find this more useful in growing and securing good crops than implicitly relying upon his superior knowledge and scientific attainments. Let him be well up in the machinery and working of a farm—be able to judge when the soil is in a fit state to receive the seed at his hand, and when the harvest is ready for the reaper. A practical knowledge of how to feed a horse and an ox will be of more immediate use to him than nice distinctions of about the proximate and ultimate elements of food. It is not necessary to our existence and the maintenance of our health that we should know the chemical elements that form our daily bread; and we know tolerably well what will agree with our digestion without first discussing the mysteries of gastric juice and the peristaltic action of the bowels. A physician might as well tell us that we cannot know how to eat properly without understanding physiology, as for the pure scientist to come out of his laboratory and tell us we do not know how to farm if ignorant of the mysteries of vegetable physiology, and the nature of living protoplasm. A knowledge of the higher branches of science is not necessary to farm successfully. A student at the seaside deplored the sad state of the boatman who took him for a cruise because the old "salt" did not understand the law of tides and atmospheric currents, and the philosophy of specific gravity and floating bodies. "Half your life has been lost to you," said the scholar. The boat bumped on a sunken reef, and Jack shouted out—"Can you swim?" "No." "Well then all your life is lost." A very important question is that one for the farmer—Can you swim? The *Captain* was a gallant ship in the docks, and science had been busy at the building of her, yet she was found to be not much more seaworthy than the ancient ships that conveyed Caesar to Britain, or the reefs and canoes of the Indian Archipelago. A superficial knowledge, or a parrot-like acquirement of technical science, is often very dangerous. What is required to succeed in farming, as in other professions, is a clear, wise, logical head, capable of making correct use of the best information. People of this class though, like poets, are born, not made.

How frequently do we find the student who has passed brilliant examinations, when he has to go out to the world utterly lack the power of correctly applying his knowledge when called upon to do so? Medical men, for instance, who are proficient in the theory of medicine, in anatomy, physiology, and all other branches of their profession, very frequently make inferior practitioners when they come in contact with any form of disease which slightly differs from the symptoms given in medical books, or when it presents some unusual form of complication. They can repeat almost every known formula in the Pharmacopœia, but, for want of a logical brain, run great risk of prescribing the wrong ingredients. On the other hand, some men who have learnt less retain more, have a practised hand and eye, can weigh evidence correctly, see all round the nature of the disease—calm in an emergency, and unerring in their treatment of a case. What is wanted most in the farmer is, as I have already tried to show, not so much a minute technical knowledge of abstruse problems in chemistry, geology or meteorology, as a well-trained logical mind—in a word, sound common-sense. It is not necessary that a judge should be a learned toxicologist before he is capable of sitting on a case of poisoning by strychnine, nor eminent as a physician and mental philosopher before he listens to evidence touching the insanity, or supposed insanity of a murderer. Scientific witnesses are called to give their opinions, and the bases on which they are formed; the judge being an educated gentleman, can fully understand the theories propounded from the witness-box, and, being possessed of an acute logical intellect, is in the generality of cases better fitted to instruct the jury than any scientific specialist would be. Farmers in the present day are an educated class; the arguments and plain deductions of chemistry are understood by them sufficiently to appreciate the evidence of experimentalists in field agriculture; they can see and feel the light without having to be drilled in the nature of prismatic colours. I need hardly say that no farmer should be unacquainted with the literature of farming; he should be versed in the latest investigations having a practical bearing on farm work; indeed, he should know something of the relation of several sciences to his occupation—and they are many; but, as Mr. Froude somewhere says, "One cannot learn everything; the objects of knowledge have multiplied beyond the power of the strongest mind to keep pace with them all." Notwithstanding the great progress made of late years in agricultural science, there is ample room left for further experiment. The "gratitude of his fellows, and those who come after," certainly awaits anyone who settles one of the many questions which still remain for solution. With all the recent development of dairying—to mention only one branch of agriculture—both here and in America, many points in dairy practice have not been definitely settled. Discussion still goes on, on the comparative merits of deep and shallow pans for the setting of milk. Churning the whole milk, or only the cream, is another fruitful source of argument, and the effect of different foods on the chemical constituents of milk—how far the quantity can be increased, and the quality altered by feeding—has not been accurately determined. Many here present might, with a little trouble and expense, add something to our stock of knowledge by undertaking a few experiments, and making the result known to the public. It is much to be regretted that we have no Minister of Agriculture in this country. Our different Governments—Tory, Whig, or Radical—pay little heed to the advancement of agriculture. Experiments which have important bearing on the production of farm produce and the fertility of soils are left to private individuals. Mr. Lawes' experimental farm at Rothamsted is a national benefit. Few, besides him, have the means, the scientific attainments, and the plodding industry, necessary to conduct such elaborate studies in field agriculture. Experiments on such a scale, and extending over so many years, have never before been known in any country. If some of the thousands of pounds expended in building ships that topple over in a mackerel breeze were devoted to endowing a national experimental farm, the benefit to practical agriculture would be incalculable. A commission on agriculture is, to my mind, quite as important as on fisheries and the preservation of oyster beds. It is very important that all farm experiments should be faithfully reported, and that all surrounding conditions should be taken into consideration. What was the treatment the land received in previous years, and what manure was applied to it? What was the nature of the

seasons, wet or dry, cold or hot, from seed time until the crop was harvested? And was the crop correctly measured or weighed? There are a great many loose statements made on agricultural matters; conclusions are also drawn quite the opposite of what they should be, from not examining the question in all its bearings, and eliminating all irrelevant matter with a judicial mind. The sayings and doings of city merchants and aldermen who dabble in farming are frequently of the most delusive character. For heaven's sake let us have more doings and less sayings. I am one of those who believe that Mr. Mechi has done immense good when he has been wrong as well as when he has been right. The energy he has shown in agriculture cannot be too highly praised; his love of farming, and the perfect frankness of his utterances. I might wish, though, that he were less credulous of the boastful tall talk of his friends and neighbours. Any one who could believe that hares might be taught to avoid the poacher's net by catching them all in one night with nets across gaps and gateways, administering them a sound horsewhipping, and then turning them down, is, to say the least, not peculiarly fitted for instructing his contemporaries in sound practical knowledge. I shall not detain you much longer. I believe the same may be said of an address at a Farmer's Club as old John Foster said of sermons—that they should be short, for which there were too reasons: Firstly, if the sermon was poor, the shorter the better it was, and if it was good, why a little of it would do and go a long way. Having commenced with the orthodox mottoes of two important agricultural societies, let me sum up what I have said with two quotations equally orthodox I think. The first is a standing quotation, to be found behind the title page of the *Royal Society's Journal*. It is from Von Thaer's Principles of Agriculture: "These experiments, it is true, are not easy; still they are in the power of every thinking husbandman. He who accomplishes but one, of however limited application, and takes care to report it faithfully, advances the science, and, consequently, the practice of agriculture, and acquires thereby a right to the gratitude of his fellows, and of those who come after; to make many such is beyond the power of most individuals, and cannot be expected. The first care of all Societies formed for the improvement of our science should be to prepare the forms of such experiments, and to distribute the execution of these among their members." The other is to be found in a like place in the *Bath and West of England Society's Journal*. It is from "Rural Economy of England, Scotland, and Ireland," by Leonce de Lavergne: "He that goes about to forward agricultural improvement must begin by finding out the true reasons of what is called routine, or the 'custom of the country.' It sometimes happens that these reasons are only accidental, and then you may dismiss them fearlessly; but it often turns out that every-day practice rests on a solid foundation of facts, and then, if you make an onslaught on local prejudices, they will be sure to best you. The true course for the agricultural improver is, to take one step at a time, to gain a clear insight into facts by experience, not to try to go too fast, and to trust to the work of time. If practice which sets up to do without theory is contemptible, theory without practice is foolhardy and perfectly useless."

Mr. BOWEN JONES, the President elect, said there was no doubt the application of chemistry to agriculture would be of great service; but when the experiments were carried out in detail, fallacious conclusions would be arrived at. It would be necessary to have the experiments based upon the truest principles, and carried out most correctly in their details. As to the spreading of manure, a new theory had exploded by the further researches of science. He recollected being at Cirencester when an experiment was being carried out in the matter of spreading manure, and which he alluded to at a former meeting. He quite thought that science without practice was useless to the agriculturist. What we wanted was the laboratory brought to the farm, not the farm to the laboratory. With regard to farmyard manure, what Mr. Morgan Evans had stated was entirely borne out by an experiment he recollected being tried some years ago. Farmyard manure had been spread on the land for three months on one plot; the same quantity was applied to a similar plot in heaps; and on a third plot the same size was covered straight from the boxes. The result in each case was the same, which showed that the

theory that farmyard manure when put upon the ground lost the whole of the ammonia was entirely erroneous. Farmers who intended to get on well at the present time should be thoroughly "up" in all agricultural matters. Whether a farmer understood the science of agriculture or not, it was necessary that he should know what the price of beef was before market day, or else he would not get that amount of money for his produce that he would otherwise receive. It was a short-sighted policy not to pay a penny for a daily newspaper, because, with a view of saving a penny a day, they might lose a sovereign a head in a dozen beasts in the market.

The CHAIRMAN said he most cordially reciprocated the sentiments of the last speaker, and seconded the vote of thanks to his friend Mr. Evans for his interesting paper. What they had already heard had convinced him that these discussions must be productive of good; for hitherto he had always understood that manures which had been subjected to the influences of air and of water were not half as good as those which were not so exposed, but taken direct from boxes. But he was convinced that he had been entirely wrong in thinking that the action of water and air on straw manures considerably deteriorated them. Mr. Evans had made use of one remark with which he perfectly agreed, and of which he had made use on the occasion of a meeting at Coventry three years ago, on proposing the health of the Earl of Warwick—namely, that there was nothing which he should so much like to see as a permanent Minister of Agriculture. He confessed that he was told that he did not know what he was talking about, and he had therefore to give in. But he was sure that to a certain extent they would agree with him that if for the last forty or fifty years they had had a gentleman of that position in Parliament they should not now be hampered with that tax which all interested in agriculture so thoroughly abominated—the malt-tax. They should also have seen all those antiquated agreements which had been referred to swept away, and they should be put upon an entirely new footing. They had heard from Mr. Jones that the important question of land tenure was discussed at the Chamber of Agriculture at Warwick, introduced in a most excellent paper by Mr. Horley. He confessed that he did not see his way out of the difficulty. He was on the committee to see what could be done, and he sincerely hoped that they should be able to arrive at some really good agreement or lease—he knew that a great many people objected to leases, but he was not one of them—and that they might see something done that would benefit the farmers, not only of this county, but throughout the kingdom. They must have a certain court of appeal where landlords and tenants could have their disputes—if any arose—settled without expense, and, if possible, without disturbing the harmonious and kindly feeling that ought ever to exist between the two classes.

Mr. WIGGIN said that there were in Mr. Evans's paper a great many truisms which no one would dispute; but, as a chemist himself, he must stand up in defence of such men as their great Professor Liebig, who, he thought, had scarcely had justice done to him at the hands of Mr. Evans. That Liebig had made some great and grievous errors, they all knew; but they also knew that he was the first among modern chemists to call the attention of practical agriculturists to the great value of chemistry in carrying on their industry. Although Sir Humphry Davy, at the commencement of this century, was one of the first chemists to call attention to the fact of the exhaustion of the land by carrying on continuous crops, still nothing was done in the way of the practical application of the principle until about twenty-five years ago, when attention was again called to the subject by Professor Liebig. There was no question that every crop of corn they carried away from the land took away with it a large amount of mineral constituents, and the land had no means of recovering these mineral constituents, unless they were applied to it in the shape of farm-yard or artificial manure. Among the intelligent agriculturists he saw around him, and so far as his knowledge went amongst the farmers generally of the Midland district, there were few who would listen to the advice of the miserable charlatans Mr. Evans had referred to as teachers of chemistry; but they must look at their great leaders Liebig, Voeleker, and Way, and when they read their able writings in the Royal Agricultural journals they might place some reliance upon the advice which they gave. If he understood Mr. Evans,

that gentleman thought that there was very little exhaustion of the soil; but Mr. Lawes, the great practical agriculturist, had come to an exactly opposite conclusion, for, in a series of experiments, he showed that the produce per acre on land manured with nitrate of ammonia, guano, and farm-yard manure was greater than that on land which had not been manured at all. Mr. Lawes assumed that the normal condition of land was to grow fifteen bushels per acre in cropping land from year to year. By the application of artificial manure alone Mr. Lawes stated that there was a considerable increase in the yield. It was, therefore, only due to the chemists who had advocated the application of artificial manures that they should give them the credit for what they had done. He quite agreed with Mr. Evans that if they could get plenty of farm-yard manure it was the best they could get. That was his opinion, after some practical experience, and after having used both farm-yard manure and the preparation of Proctor and Ryland and other artificial manure manufacturers. Mr. Evans had also referred to the stupid agreements—he did not know whether Mr. Evans used the word "stupid," but he (Mr. Wiggin) would—made between landlord and tenant. His opinion was that the first duty of the landlord was to look round and obtain for his tenant an intelligent man, with money at his command to work the land. When he had done that, the less the tenant was hampered with covenants and agreements the better for all parties concerned and for agreements in general. There would be no necessity for any agreements as to how the land should be cropped. Of course he would not allow a tenant to plough up fine old turf land; but as regarded cropping his impression was that the tenant knew a vast deal more about carrying on his farm profitably to himself, and advantageously to the landlord, than any one else. Coming there to listen to the Editor of the *Milk Journal*, he hoped to have heard something of the production and composition of milk, which formed so large and important a part of the food of the people of the town of Birmingham. Knowing something of the milk business himself, and seeing before him a gentleman who was a very large producer of that article, he should like to know from Mr. Evans whether in his experience he had found that milk from cattle affected with the foot-and-mouth disease was productive of any ill effects to the consumer. He did know that within the last nine months, in the neighbourhood of Birmingham, nearly all the cattle had been so affected, and soon after they had breaking out in their midst an epidemic of small-pox. Perhaps Mr. Evans, from his experience, could throw some light upon the subject. For himself he had found that where milk from cows in a healthy condition would keep for 36 hours, milk from cattle suffering from foot-and-mouth disease became rancid and bad in less than ten hours. He had never taken the trouble to analyse the milk himself or to send any to an analytical chemist, but he should be glad to hear Mr. Evans's experiences on the subject if he had any. His cows so affected brought forth dead calves, and the same was the experience of one of his neighbours.

Mr. MASFEN said he had consulted a chemist, who said it was wrong to apply manure in a heated state. He (Mr. Masfen) was in favour of allowing the manure to lie for a time upon the land instead of ploughing it in, and he expressed his belief that if tenant farmers were to attract capital to the land they must have greater freedom of action in the matter of leases and agreements than they have hitherto had.

Mr. BARTLETT said he did not agree with all that had been said on the subject of leases. He thought the best security farmers could have were leases, and this was the experience of the agricultural world. The best farms he knew of were in Norfolk and Scotland, and the custom in those parts of the kingdom were long leases, which were renewed a short time before the time arrived for their expiration, so that the farmer was able, practically, to look upon the land as his own, and expend his capital as he thought best for himself and his family. With all that had been said about the good disposition of landlords and the honest inclinations of tenants, looking at human nature as it was, all this would never answer the same as a good long lease. The agriculturist ought to be in the same position with reference to the investment of his capital as the manufacturer or tradesman, and he ought to be in a position to have similar banking facilities.

Mr. LOWE was told, by gentlemen who were able to inform him, that farms to let for good tenants with capital were tolerably plentiful in the neighbourhood of Birmingham. He was delighted to hear that such was the case. Some two or three years ago such a thing as a farm to let was not known. If one was vacant then, farmers were too much in a hurry to go and occupy it, although they knew that the previous tenant had not been able to make it answer his purpose. Now, however, farmers were becoming alive to their own interests, and they would not now unwisely take land with the risk of not making it a success, but would apply to the undertakings what he had before ventured to call "a commercial eye." They asked themselves, "Will it answer my purpose, and will the landlord grant me those conditions in the shape of leases or agreements that are necessary for me before I put my capital in the land?" If not they would not risk their capital on an uncertainty. He knew that in many estates there was a limited ownership which prevented the present holders from granting conditions which a tenant had a right to demand. If so, they wanted legislation with regard to that particular class of land in order to make the holders responsible for the contracts they made. But with regard to legislation where a man had the independent control of his property he very much questioned the propriety or the wisdom of asking for it, unless they at the same time sought for the same power over all descriptions of property.

Mr. EVANS said he was prepared to give to chemists credit

equal to that which Mr. Wiggin had bestowed upon them. As to the foot-and-mouth disease, he had no doubt it was highly dangerous to use the milk from cows so affected; and he had heard of well-authenticated cases of blood-poisoning resulting therefrom.

Mr. T. B. WRIGHT said that the motto of the Royal Agricultural Society, *Practice with Science*, was adopted 38 years ago, but they did not seem to carry out their practice effectually. It reminded him of the story by Jeremy Taylor, of the young theological student who, hearing a man of great age still debating on the subject, wanted to know when he would have time to practice. The land of England was not farmed as it ought to be. They had to import enormous quantities of provisions to feed the people. This was a very disgraceful state of affairs with the capital and resources the country possessed. The country, it was remarked by a recent writer, was not half farmed. If it was they should have enough to feed the people, and have some to export. How that was to be brought about he could not say. But not only was the land not half cultivated, but they did not employ half the number of labourers they should, and the consequence was that the towns were overcrowded. There was no use blinking the question. It was absolutely necessary for the welfare of the country that the land should be made, as it might be, to produce more, and they would thus secure a healthful and well-paid occupation for a greater portion of the people.

The discussion then closed.

STAFFORDSHIRE CHAMBER OF AGRICULTURE.

At a meeting held at Stafford the newly-elected President, Mr. THOS. NEVILLE, was in the chair.

The CHAIRMAN, in opening the discussion on Local Taxation, said he cordially agreed with the remarks made at the annual dinner as to the advisableness of confining their attention to one subject at a time. Their agenda that day contained three subjects, viz., "Local Taxation," "Prevention of Contagious Diseases of Animals," and the "Malt Tax and the Licensing System." Now, to discuss all these subjects properly would require more time than they could devote to them at any one meeting; in fact, there was enough there in those three subjects to occupy three meetings. But he did not think that they were bound to strictly follow the list of subjects forwarded to them from the Central Chamber, but thought that they might very well make a selection of one of them, and, by so doing, avoid that rambling about from one question to another. The Central Chamber had, he thought, very wisely given prominence to the question of local taxation by placing it first on the list for discussion. It was, to his mind, the most important question of the present day, and pressed deeply upon the agricultural interest. He did not see how it could be considered just for one class of property alone to bear all the heavy burdens that real property, such as land, had now placed upon it. In the course of an able address the Chairman pointed out the injustice of the present system, and alluded to the fact that the whole of the turnpike roads were being gradually thrown upon the rates. Such was the case in his parish, and the effect was greatly to increase the rates. They should take care that as far as they could resist it no more burdens of that sort should be thrown upon local taxation until they had secured a more equitable basis of assessment than that at present in existence. He moved the following resolution: "That, inasmuch as the annual amount levied for purposes of local taxation has been more than doubled during the last twenty-five years, it is manifestly unjust that this large sum should be raised from one class of property only. That, in the opinion of this Chamber, no settlement of the question will be satisfactory that does not so amend the basis of assessment as to make all classes of income bear a fair proportion of the burden."

Mr. ROBOTHAM observed that the real property in this country had all been inherited or purchased subject to the rates that were levied upon it, and if they relieved it of that taxation they would be putting a large amount of money into the pockets of the owners of such property, and would be putting a grievous burden upon those classes of persons who

were in receipt of incomes, often very precarious incomes, that might be stopped at any moment.

Mr. BRAWN recapitulated the leading arguments against the present system. He considered that this question was of national importance. If it was one confined to agriculturists only, his hopes of obtaining a remedy of the evil would not be very sanguine of success, for he could not recollect a single instance in which the complaints of agriculturists had had any effect whatever on Parliament in reference to any measure affecting them that had been brought forward. In reply to what had been said by Mr. Robotham, who complained of the insul专业性 of the proposition contained in the resolution, but did not suggest how they were to get out of the difficulty which, he thought, such a proposition would bring about, he (Mr. Brawn) would remind him that it had often been urged that all classes of income should be assessed at a certain level. It was quite true that if the resolution was acted upon owners of real property would be to some extent relieved of the burden they now had to bear, but then again under the income-tax schedule they would still have to share that burden with other members of the community. He had great pleasure in seconding the resolution proposed by the Chairman, but suggested that there should be some addition made to it to show that the present system of local taxation was oppressive to owners of house property in towns as well as on landed estates in the country.

The CHAIRMAN agreed with the suggestion, and the resolution was ultimately altered as follows, the words in *italics* being the addition: "That inasmuch as the annual amount levied for local taxation has been more than doubled during the last twenty-five years, it is manifestly unjust that this large sum should be raised from one class of property only, affecting, as it does, very heavily, house property in towns equally with landed estates. That in the opinion of this Chamber no settlement of the question will be satisfactory that does not so amend the basis of assessment as to make all classes of income bear a fair proportion of the burden."

The Earl of LICHFIELD expressed his entire concurrence in a remark made by the Chairman that there had been for some years an uncalled for and unnecessary desire on the part of Chancellors of the Exchequer to reduce the expenses of the country on the face of their budgets to an unwise extent, and there was no easier way of accomplishing that purpose than by throwing certain portions of expenditure upon the country in a way that would not appear in the annual budget. If it was proved, as he thought beyond all doubt it had been proved

that these burdens really fell on only a part of the property of the country, then he thought that it was fair to say that it was a grievance and ought to be remedied. He was not surprised that the question had been taken up with such warmth by Chambers of Agriculture, because one of the principal subjects that had hitherto occupied their attention, with respect to the tenure of land, had been the importance of encouraging a larger amount of capital to be invested on land, but it could not be denied that if this particular kind of property was taxed more heavily than any other that must prove the strongest possible discouragement to the investment of capital in that particular industry. With reference to the Education Act, to which the Chairman had alluded, he was strongly of opinion that by placing the whole expenses of carrying out the Act on the rates, the effect would be to discourage that desire to have it properly carried out, up and down the country, which otherwise might have been exhibited. The apathy which was plainly shown in some districts was not from any objection or indifference to education, but because certain classes felt that they were called upon to pay for it, to the exemption of others. This was the feeling with regard to the levying of an education rate; and it was just one of those cases which suggested very forcibly the necessity of levying the tax on all classes, on those in the receipt of incomes as well as the possessors of real property. Because every person of every class in the receipt of an income received that income in consequence of the general security of the government in this country through the good administration of the law, resulting in order and confidence. How the question was to be decided he was not prepared to say, but he did think there were very great difficulties in the way of a settlement, and they must be prepared to wait for public opinion to become ripe before they could expect Parliament to interfere. Their Chambers of Agriculture had put the case very strongly before the public over and over again, and he did not think there could be much more to be said on

the subject. It now remained for Parliament to consider it, and decide what should be done, whether by means of a Royal Commission, as was suggested, he believed, in the article to which he had referred, to investigate the whole system of rating throughout the country, or in some other way, he could not say. The resolution, with the addition suggested by Mr. Brawn, was then put and unanimously agreed to.

Mr. R. H. MASFEN briefly referred to the subject of the prevention of contagious diseases in animals, which was next on the agenda paper for discussion. He said there being a resolution already on the minutes, passed at a previous meeting—to the effect that Government should be urged to provide greater accommodation for the slaughtering of cattle, and stricter regulations for enforcing the same at all ports where foreign cattle were disembarked (except stock from Ireland)—he suggested that the resolution should be forwarded to the Central Chamber. When he told them that a near neighbour of his had, during the past 25 years, lost upwards of 425 head of horned stock from diseases imported into this country by foreign cattle, he thought that they, as agriculturists, forming no inconsiderable portion of the community, were not asking too much of the Legislature to do all they possibly could to avert the spread of such diseases as those from which the British farmer had so grievously suffered.

Mr. Masfen's proposition was then agreed to.

It was resolved: "That this Chamber would be prepared to support a beer tax as a temporary measure, and believes that the malt tax ought to be abolished on free trade principles only."

The Earl of LICHFIELD gave notice that at the next meeting he would move: "That a committee be appointed, consisting of six landowners and an equal number of occupiers, to report on the best means of providing for tenant-farmers greater security for the capital and labour they invest in the land."

CORNWALL CHAMBER OF AGRICULTURE.

THE GAME LAWS.

At the meeting, held at St. Austell, there was a numerous attendance, the subject for discussion being the Game-laws. Col. Tremayne (Carelew) presided.

The CHAIRMAN, in opening the meeting, read a letter which had been received from the Earl of Mount Edgcumbe, in which his Lordship said: "I fully intended to have been present at the meeting of the chamber on Friday, and was very anxious to hear the discussion which is to be opened by Mr. Snell, because I feel convinced that the subject, if temperately and practically discussed, is capable of a satisfactory solution. I regret very much not being present, but my absence is unavoidable, as I shall be in Lincolnshire attending the funeral of my aunt, Lady Brownlow." Mr. Deeble Boger wrote as follows: "Please to excuse my absence at the next meeting of the Cornwall Chamber of Agriculture. I am still enough of an invalid to be ordered to avoid as much as possible travelling about, especially in cold or wet weather. I see the subject named for discussion is The Game Laws. On that I have already at a former meeting expressed the opinion that what is wanted is, as regards hares and rabbits, legislation that the occupier should be at full liberty to destroy them. And I am inclined to think that the simple and effectual way of accomplishing this would be to enact that in every prosecution for trespass in pursuit of hares and rabbits, it should be necessary for the prosecutor to produce at the hearing an authority in writing from the occupier to the prosecutor for his taking proceedings in that particular case."

Mr. SNELL then introduced the subject of the Game Laws. He said that no person who had studied the subject could fail to come to the conclusion that, whatever position farmers took in the matter, they had been driven to it. He believed he was in a position to take an impartial view of the question, from the fact that for nearly forty years he had been a landowner, and that during a great deal of that time he had also been a large tenant-farmer. When the agitation on the subject was first commenced there were many people who consid-

ered that there should be an immediate alteration of the Game Laws, while there were others who considered that no change was necessary. His own opinion was that there ought to be some change, but it should be a change that would not interfere unduly with the rights of any man. It could not be denied that a large section of the community was in favour of total abolition, but he could not help saying that he thought those who advocated the total abolition of the Game-laws went a great deal too far, because he gathered from what he heard and read that they contemplated the sweeping of all game from the face of the land, and that they went so far as to say that it should be a most unusual thing, if they could have their way, to see anything like game on the country's side at all. For himself, he could not go to that extent, because he thought it would be a great injustice to the proprietors of the land, and would unduly interfere with those who, like himself, were very fond of sport. What he intended to propose was a revision of the laws, and not their abolition. What yeomen and farmers complained of was that the tax of £3 for a game licence was a kind of prohibition upon them in their small holdings, and bore no proportion to the same tax which was levied upon those who had their thousands of acres. But to his mind the way to meet that difficulty was this, that the gun tax in future should cover the game licence, and that every man who took out a gun tax should be allowed to kill game wherever he had a right, and wherever he obtained leave. One other grievance in this direction which the small owners felt was that during the last twenty years a large amount of land had been planted in every county in England for the purpose of making game preserves, and having been so planted, had been taken off the rate book. The landlords, perhaps, might say that the other portions of their property had to bear the burden, and although that might be true, yet it was not the case so far as the small landowner was concerned, because he had to pay extra rates in consequence of the larger landowners getting their woodlands en-

tirely free. The over-preservation of game, and more particularly of hares and rabbits, was, he knew in many instances, a very serious tax indeed upon the tenant-farmer, and he was satisfied that if it were not for the over-preservation of rabbits, there would not be half the surveillance and supervision carried on by gamekeepers as was the case at the present time, for when a landlord once stocked his farms with rabbits, the gamekeepers were there morning, noon, and night, and a farmer could scarcely stroll over his farm without running up against them. This was a constant source of annoyance. The objection was not unfrequently raised that they ought not to interfere with the landlord's legitimate sport, but he knew of cases in which rabbits were not preserved for the purposes of sport at all, but as a means of adding to the landlord's revenue; the rabbit money was calculated as being so much rent. If they could only get rid of the rabbit pest, they would get rid in a great measure of the gamekeeper. Then, again, with respect to the labourer, he did not think he should be acting a manly part if he stood there to advocate the rights of the class to which he belonged, and omitted at the same time to vindicate the rights of the labouring population. Until the Bill brought in by Sir Baldwin Leighton, in 1862, was passed, a policeman never had the power which he now possessed to stop people and to search them on the highway. They frequently read in the papers of cases in which a man had a ferret or a net in his possession, but they did not know of the hundreds and thousands of cases that happened every year, in which honest men were dragged and searched when they had nothing whatever about them; and therefore, on behalf of the labourer, he contended that a policeman never ought to have the power, without any authority, and on a mere suspicion of his own, to collar a man on the highway and search his pockets. That was a law which was not required. If a man was found with a couple of fowls in his possession it was necessary, before he could be convicted, that proof should be forthcoming of his having obtained them in a dishonest manner, and there was no reason why the same law should not apply to people who were found in the possession of game. Then again, it was difficult sometimes to make a labourer believe that he was doing wrong, although in reality he was doing so, and this arose from the example that was set them by grasping, selfish landowners. He did not apply this observation to all landowners, because as a rule they were an honour to their class, and of great service; but there were exceptions, and it was to those exceptions that he applied the remarks. But the fact was that when a labourer saw the great damage that was done to his master's crops by the over-stocking of rabbits, he did not see that there was any great harm in his carrying off one of those rabbits. All the tenant farmers wanted was that the law should be so altered that they should not suffer grievous injury, but they did not want it to be so altered as that it should interfere with the legitimate sport of the landlord; and he believed that they would not have half the difficulty which appeared to exist at present in coming to a satisfactory settlement of the question, if their landlords would only meet their tenants face to face more often than they had hitherto done. He moved, "That the Game-laws require revision and amendment, and that no alteration will be satisfactory or just which does not give to the tenant the inalienable right to kill hares or rabbits on the lands they occupy?"

Mr. JAMES RUNDLE seconded.

Mr. J. K. MARTIN thought the general feeling was that gamekeepers were a great nuisance; and as regarded rating, it was very unfair that men who took farms at a very high rental should pay their share to the county rates, whilst plantations were not rated. His experience was that wherever game-preserving was left to the tenant-farmer, the landlord always found a good day's sport.

Mr. TREMAYNE (Heligan) very much regretted that the landowners of the county were not present in large numbers. The discussion that day was supposed to have been on the question of the Game Laws; but at the same time he had no doubt that the most serious part of the question was that which related to rabbits. If that irrepressible quadruped had only been left behind in the ark, they would have been spared all this discussion. Rabbits were an unmitigated nuisance, and they were no pleasure to landlords, especially in Cornwall, where the earth-banks and warrens were spread all over the place; and there was no fun whatever in rabbit-shooting.

He believed that any legislation which sought to suppress and subdue that evil would be most beneficial to the community at large. But the question of compensation which was to be paid to tenants was a very difficult one, because very often the damage was not asked for until long after the injury had occurred to the crop, and therefore it was impossible to say what kind of crop would have grown on the farm, supposing that there had been no rabbits there at all. The compensation for what was called game-rent was equally unsatisfactory, because rabbits were an ever-fluctuating quantity. But then came the question, how were they to deal with the matter? It was all very well for Mr. Snell and those who thought with him to say, "Let us dispense with it by one broad sweeping measure; let rabbits and hares be given up to the tenants"—but he could not be got so far as that, and he believed if that were done, it would be productive of great jealousies and quarrels amongst neighbours. Let them suppose three farms contiguous to each other. A was arable, B was grass, and C was arable. The tenant B, growing no cereal crops, thought he might as well have a few rabbits on his farm for amusement. Those rabbits would not remain to feed on his grass lands; but they wandered into the cornlands of A and C, and although A and C might have the power to kill the rabbits on their farms, it would be absolutely impossible to keep them in such subjection as to prevent them becoming nuisances. This would inevitably lead to quarrels amongst neighbours. As a landlord, he would say that if they were to give up their rabbits, they entirely must ask the tenant-farmers in their turn to give them (the landlords) some protection. It might sound absurd that landlords should come to their tenants and ask for protection against their rabbits, but still the thing was by no means unnecessary. He was recently talking to Earl Fortescue, who possessed an estate in Lincolnshire on which he had no residence, and his lordship informed him that on that estate he made over the hares and rabbits entirely to his tenants; but this year he had received a communication from his agent begging him to rescind the grant, because the hares and rabbits had been allowed to increase to such an extent that the hedges had been destroyed, and the trees and plantations absolutely annihilated. Therefore he did not think it was fair that hares and rabbits should be absolutely and entirely given up to the tenants; but he did think that if landlords and tenants had an equal right to kill them, that would be quite sufficient to suppress the evil within proper and manageable bounds. It would be a very friendly agreement, and would cement that bond of union which always ought to exist between landlord and tenant. As to what Mr. Snell had said with regard to the landowners, he was willing to admit that, as in all other classes, there were some black sheep amongst them; but, as a class, he could not help feeling that Mr. Snell had given them harder slaps in the face than under all the circumstances he was warranted in doing. He considered that if the tenant received an equal right with the landlord to kill ground game, it would be very necessary that some modification should take place in the law of trespass. Mr. Snell had complained of "that fiend in velvet," the gamekeeper, but the gamekeeper was very often a hard-worked servant, and how infinitely more disagreeable was it to have other people who were in no way connected with them wandering over their farms? He thought that winged game ought to be treated as property, and that it should be made just as great an offence to steal a pheasant from a man's land as to steal a Cochin China cock. A vast deal of false sentiment and romance was attached to the word "poacher;" he was an ale-house hero, and was regarded as a very daring spirit. He went out with his gun, shot a pheasant that he saw in a tree, and called it sport; but he (Mr. Tremaine) could not see what sport was in it. This ale-house hero would be divested of his romantic position if, when he shot a pheasant in that way, he was treated as an ordinary fowl-stealer. With respect to the rating of woods and plantations, he quite agreed that they should bear their fair share of the rates, and he had no doubt that this next session of Parliament would see some Act introduced which would remedy that evil. There was another evil which he had not often heard commented upon in the discussions of the Game-laws, but which deserved some consideration, and that was the question of letting game. There were many people who let their game on properties on which they did not reside, and he could quite understand that that was a

most injurious and unpleasant thing to the tenants on such properties. It must be very irksome, indeed, to see strangers exercising seniorial and manorial rights over land which did not belong to them. Mr. Snell and he did not agree, but that was no reason why they should not discuss the matter temperately, for it was only in that way that they could arrive at a satisfactory and amicable solution of it. He moved, as an amendment, "That the Game-laws require revision and amendment, and that no alteration will be satisfactory or just which does not give to the tenants an equal right with the owner of the soil to kill hares and rabbits on the lands they occupy."

Mr. ALLANSON seconded this.

Mr. J. ROWSE did not think that either Mr. Snell or Mr. Tremayne went far enough. His opinion was that the rate-payers would never be satisfied until game was rated.

Mr. GURNEY said he believed that, as a rule, if rabbits had caused any injury to a tenant the landlord was ready and anxious to compensate him for it. ("No, no.") At any rate, if he did not do it, he could hardly be considered an honest man. But, from his knowledge of landowners, he did not believe that, as a general rule, there was anything like a feeling on their parts that their tenants should suffer injury and remain unremunerated (dissent). But, as to a remedy, he did not see that it was to be effected by Act of Parliament. It was not generally known that unless there was an agreement between landlord and tenant to the contrary, game by law belonged to the tenant, and the reason why the landlords generally had the entire control over game was that they reserved it in their leases. He did not see that it was at all necessary to bring legislation into action. There was such a thing in this country as honourable feeling, and he was satisfied that such a feeling as this between landlord and tenant, accompanied by an emphatic expression of public opinion in condemnation of the over-preservation of game, would effect the desired result. ("No, no.")

Mr. ALLANSON said in a hazy moment he had seconded Mr. Tremayne's motion, but he did not understand it. What he thought would be a remedy for the matter would be to strike out hares and rabbits from the game list, and to consider them as the property equally of the landlord and the tenant, all agreements to the contrary to be null and void. He did not think it would be desirable to have total abolition of the laws, and was in favour, as Sir John Trelawny was, of all matters connected with game being brought before the

county court judge, and not before the magistrates of the district. He was disposed to think there would not be much of the honourable feeling spoken of by Mr. Gurney. When they lost their tempers, there was very little of that feeling evinced. If they wanted anything to be done it must be effected by the Legislature. They ought to strongly object to the power of the law to collar a man, and see if he had anything in his pocket. He would accept the resolution if Mr. Tremayne would add, "And that all agreements to the contrary be null and void."

Mr. TREMAYNE said he would adhere to his own resolution. Mr. NICHOLL knew of many people having been brought to poverty through the Game-laws, and could tell of cases in which landlords would not give remuneration for damages that had been caused by their hares and rabbits.

Mr. TRUSCOTT condemned the action of gamekeepers, and claimed an equal right with landlords to shoot game. He would move, "That it is the opinion of this Chamber that it shall not be legal for any person to preserve game of any kind on any land other than in his own occupation."

Mr. HAYE then seconded Mr. Tremayne's amendment. He considered the objections raised by Mr. Gurney were more theoretical than practical.

Mr. KEAST remarked that there were men who were so oppressed by the Game-laws that they would not come forward and speak of the matter. The Game-law was one which caused the English constitution to create disgust amongst the people, and there would be a time perhaps when the poacher would be thought by the tenant to be his friend, because he would grant the tenant, to some extent, his existence. He seconded Mr. Truscott's motion.

Mr. SNELL expressed his gratification at Mr. Tremayne having progressed in the matter. There was never a greater delusion in the world than to trust to compensation. Public opinion and honourable feeling they had been looking to for years, but what had they given them?

The motions were then put to the meeting. Eight voted for Mr. Truscott's, six for Mr. Tremayne's, and Mr. Snell's was carried by a large majority.

The meeting broke up with cheers for the Chairman and for Mr. Snell.

The CHAIRMAN expressed his concurrence with Mr. Snell's motion.

ATHY FARMERS' CLUB.

THE LABOURER'S COTTAGE IN IRELAND.

At the February meeting, Mr. William Young in the chair, Mr. C. W. HAMILTON, J.P., agent to the Duke of Leinster, read the following paper on The Labourer and his Cottage:

The condition of the labourer and his cottage are so closely connected that I have thought it desirable, both on the previous occasion when I addressed you, and now to promote discussion upon them together. I long ago used to urge on the Royal Agricultural Society that the publication of plans of cottages, though of some use, was not of as much use as it might be if accompanied by specifications and estimates. The objection generally taken was that prices varied so much in different parts of the country, that it could be no accurate guide. This objection, I think, carries little weight, and his Grace the Duke of Leinster concurs with me in thinking that good may be effected by showing exactly what has been done on his estate. I have given accurate plans and quantities, and also the price of the materials, including doors, windows, and other parts of the internal fittings, as estimated for by Messrs. Thomas and Charles Martin, of the North Wall Saw Mills, including delivery on railway or canal boat, and have allowed what I consider enough for the average cost of carriage and contractors' profits. These plans and estimates have been printed for the use of his Grace's estate; but, with his usual liberality, he has presented copies not only to this Club and the Royal Agricultural Society, but to the Press, and others interested in this branch of agricultural improvement. The plans are before

you, and you can see how easy it is to adapt the estimates to different requirements and circumstances. Something may be saved by the farmer lending his assistance in drawing materials, excavating foundations, and giving such help. But the best way is to take really what are the contract prices for such work, which are given in different parts of the country, and save upon them if you can, but by no means to injure the comfort and permanent stability of the building. I look upon a great many statements upon the cost of cottage building as being fallacious. One architect sent me a lithographed plan of a cottage and estimate, in which the masonry was set down as to have been done for three shillings per Irish perch. I never, even in the old cheap times, could get it done for less than five shillings; so that I think you will agree with me that there was no great use in such an estimate. The cheapest and best cottages I have seen were those which that excellent landlord, Lord Bessborough, referred to in his evidence before the Union Rating Committee as having cost only £90 for the double cottage. There were, however, special circumstances in this case. The material was at hand, and labourers and tradesmen were residents in the locality; the roof was of the small, irregular, Newtownbarray slates, ranging about 6 in. by 8 in., and costing some five or six shillings per hundred. They were not ceiled, and had mortar floors. This is a great step in advance of the old hovel; but I cannot help thinking that it is better to pay a little more, and have a more comfortable and lasting cottage. In my plans the pencil can be drawn against any-

thing considered redundant, or the price reduced or varied if the circumstances of the locality require it; but I have endeavoured to face the cost boldly, and, as I believe, pretty nearly correctly; and I hope that while they are invaluable to me in arranging the work to be done on his Grace's estate, they may assist others in coming to a right conclusion as to what is absolutely necessary to insure comfort and permanence. Before making any observations on the mode in which the connection between the labourer and his cottage may be the best effected, I shall venture on some observations on the state of the market for agricultural labourers. Let no one suspect me of undervaluing the good qualities of my countrymen while alluding to some defects in their natural character. There must be some radical defect in the circumstances in which they are placed to render them notoriously inferior as labourers or artisans in their own country to what they are when they have emigrated elsewhere. I believe I am correct in stating that both in England, Scotland, and the United States the Irishman is hardworking and skillful, and of good temper had humour, but that he seldom pushes himself as far forward or into as high places of trust and superintendence as the Englishman or Scotchman. I have seen this myself in the Manchester and Glasgow manufactories, and heard from residents in New York that it is very remarkable how the Scotch and German servants push over the heads of the Irish, who are perhaps too contented with the duties and earnings of mediocrity. There may be something in the genial but careless character that makes the Irishman so distinct from the others that

Should you meet him outward faring, boy,
In Lapland's snow, or Chili's glow,
You'd say—"What news from Erin, boy?"

I cannot, however, look upon the faults of the labourer in this country as entirely his own. I think much may be due to the position he is placed in. You know how he can work upon a spurt when hay or corn is in danger; but what heart can a man have in his work when he sees no difference made between the really skillful and honest and the scheming, dishonest workman? I am sure that you, practical farmers, will agree with me that there is this difference between the English and Scotch labourers and the Irish, that the former will, as a general rule, do what they are set to do fairly, without being overlooked—that they understand what eye service is, and would be affronted if accused of it, and consider it dishonest not to do the work they have contracted to do: but that, on the other hand, the Irish labourers require a ganger to be constantly over them, and, if not sharply looked after, are very apt to diminish the size of their spadeful, and perhaps sit on a bank and take a smoke, and if the mistress of the house comes across them in her walks, say, in an imploring tone, "Ah, sure you would not tell on us." Is it any wonder that the farmer gets as many as he can together, never leaves them until the work is done, and then rests from the necessity for this troublesome superintendence until he has some other great occasion for doing a job of work? There are faults upon both sides, and our earnest endeavour ought to be to try and correct them. The tenant-farmer should have the means of making his labourers so comfortable that he will have an interest in working for him honestly, and with a will; and in order that he may be brought to feel and do his duty, it is essential that, while in the farmer's service, he should be completely dependent upon him—free to accept any better situation, but bound by his contract to fulfil the duties required while in his present one. Mr. Justice Lawson says: "I do not believe in the possibility of planting every labourer in his own homestead, as lately suggested, but *much may be done in that direction*. The farming classes having now obtained security of tenure for themselves, should not object to the extension of somewhat similar advantages to the labourers." There seems to me to be a great fallacy here, and that nothing would tend more to prevent farmers from building good cottages than the idea that any legislation such as Mr. Lawson shadows forth could make the labourer independent of his employer. Any hold given to the labourer on his cottage and garden other than the honest endeavour to make himself useful to his employer would have a most mischievous tendency. I know that one of the greatest obstacles to landlords building snitable cottages is the fear lest legislation should create, as against them, rights which they never contemplated giving themselves. No; the free lances, or rather free spades, of

the labouring population, of which it is desirable that there should be a proportion to regulate the market for labour, should be located in the villages and towns. But the tenant farmer must be free to select the best men he can get, and they must be bound together by mutual interest and good offices—free to terminate the engagement when either fails in fulfilling his side of the contract. This is not merely a question of the labourers' and the farmers' comfort and well-being, it is a great national question. Look at the hovels that you see the labourers inhabiting, see the want of proper food in them, see the prevalence of disease, see the ravages caused by intemperance, the refuge of hopelessness and care, and ask yourselves if any legislation can produce content in their occupiers? and if the whole foundation of the fabric of society has cause for discontent, can you wonder that crime follows close on misery? Look, again, at the lands. Is not their due cultivation of national importance? Is it not one of the principal reasons that much land is lying comparatively waste, which is capable of producing food largely, that the labourer is not employed upon it? It is a well known fact that in those districts where the land is properly cultivated there is at least one constant labourer to every fifty acres. With less human power the energies of the soil cannot be drawn forth, and you must lay yourselves out for pushing on in the art of production, or you will fall out of the ranks into poverty, and fail both in your duty to yourselves and your country; and, as I have told you before, do not believe in the constant outcry of the scarcity of labourers. I believe that they are to be had on terms remunerative to the farmer. I know of one district where the tenants' constant complaint to me has been that the labourers had emigrated to such a degree that they could not work their farms properly for want of them. I had an occasion to set on a work of drainage in that locality, and had no difficulty in getting nearly one hundred men, most of whom would otherwise have been left in idleness through the whole winter season. They are getting fair wages, and doing good work. I must press on you again and again, as I have done often before, that there is no use in thinking of going on with casual labour. You must keep a man and his family in comfort all the year round, if you wish to claim honest labour from him. Lay yourselves out for this, and I have no doubt but that your landlords will throw themselves cordially into the work of assisting you. I can answer for the noble owner of this property that he will do his utmost to help you; but I think it essential that, before a cottage is built, there should be a clear understanding, and perhaps some voluntary contract, between the landlord and tenant that it is to be used for the purpose of keeping the labourer in comfort and constant employment. There might otherwise be danger in the outlay of the landlord being used merely to diminish the outlay of the tenant on still casual labour. Assuming, therefore, that it is a matter of the most vital importance that labourers sufficient to cultivate the soil to the best advantage should be comfortably housed, let us consider how that may be best done. I think that since the passing of the Land Act it will facilitate future dealings with the land if the landlord himself undertakes the buildings; and if it is not convenient to him to spare the money, he should have ample powers of borrowing from the Government; and, therefore, I think it fair to assume that, whether it be his own money or borrowed money, the payment of £6 10s. per cent. for twenty-two years will extinguish the debt. Now, I have frequently heard landlords say that they expect a building interest from the labourer in the shape of annual rent. This it is manifestly impossible for the labourer to pay; nor is it just, for the landlord, at the end of the twenty-two years, has the whole reversion of the value of the cottage, which, if permanently built, and kept in repair, ought to be scarcely diminished. Besides, it will be allowed by any tenant that he would pay a higher rent for a farm with comfortable labourers' cottages on it than he would if they were merely wretched hovels. Again, who could doubt that one of the features that would enhance the value of an estate, if brought into the market for sale, would be its being well circumstanced as to the labouring population? I do not, therefore, think that it is to the labourer that the landlord should look for interest for his outlay. My own opinion, and, I may add, that of the Duke of Leinster is, that where a tenant wants a good cottage, and engages to give the labourer he puts into it the means of living in comfort, and not charge him any rent, 4 per cent. would be sufficient for the tenant to

pay, the tenant covenanting also to keep the premises in repair. I think he would find it a cheap bargain, and that the landlord would be amply repaid in the general improvement of the value of his estate. If any great move in this direction took place, the effect would be to cull out and offer an inducement to stay in the country to all the best workmen; and if any will not work, we can well spare them to America. What we want to encourage is the pride of independence, arising out of honest self-exertion; and the man who knows himself to be a first-rate ploughman, drainer, or cattleman, will feel that he has been given the best cottage and allotment, not as a matter of favour, but as a well-earned right. The legislation with respect to the tenure of labourers' cottages has been rather complicated, owing to its cumulative character, embodied, or rather repeated, with slight alterations, in several existing acts of Parliament. The Summary Jurisdiction Act of 1851 provides for the recovery, under warrant from the magistrates, of houses held in any market town for a period not exceeding one month, and at a rent not exceeding one pound per month. By a subsequent Act passed in 1868 the local authorities in corporate towns, or those having town commissioners, have power to present such houses as are in a condition or a state dangerous to health, or unfit for human habitation; and if the landlord does not repair them, the local authorities can improve them, and charge the landlord with the cost. But then, on the other hand, the landlord has the option of pulling them down, instead of repairing them, and the fear of burdening the rates leads to this Act being seldom put in force. Something, however, might, I think, still be done by constituting some local authority, such as a county sanitary inspector, who would bring the cases where houses subject to rent are unfit for human habitation before the magistrates, with appeal to the Quarter Sessions, and obtain an order for having them put into a proper state of repair at the rent receiver's expense, but without giving him the alternative of eviction and levelling, except on paying an amount of compensation sufficient to house the occupants elsewhere. The Cottier Tenant (Ireland) Act, promoted by Sir William Somerville, now Lord Athlunney, was passed in 1856. It applies to dwelling-houses situated anywhere without more than half an acre, if any, of land held therewith. It gives the landlord power of recovering possession on short notice, provided that the tenement is held by written agreement, that the tenure is for a defined period not exceeding a year, the rent not exceeding 12s. per month; that it has a sufficient chimney, and at least two rooms and a privy are provided, and the premises kept in repair by the landlord. The faults in this act are, I think, that two rooms are not sufficient for a family, and that the use of thatch is not excluded, both on account of agricultural waste and want of permanency. This was followed by an act passed in 1860, enabling the Board of Works to grant loans for the purpose of erecting such cottages. This Act expires during either this or the next Session of Parliament; the words fixing the date of expiry seem rather ambiguous. Then came the Act of 1861—the Landlord and Tenant Law Amendment Act, by which summary proceedings for the recovery of cottier premises may be had before two magistrates at petty sessions, provided that the tenement, wherever situated, consists of a dwelling-house or cottage without land, or with any portion of land not exceeding half a statute acre, held under a written agreement, at a rent not exceeding five pounds per annum, for one month, or from month to month, or for a shorter period, where the landlord undertakes, by the agreement, to keep the dwelling-house or cottage in tenable condition or repair. Thus we have the anomaly of three Acts on the same subject all in force and differing but little. They are, however, sufficient for the purpose. The recovery of possession in the last-mentioned Act also applies to premises held by servants, herds, or caretakers. My own opinion is that the best tenure for a labourer's cottage is his holding it with a small garden, free of rent, as part of his wages, when, if he misconducts himself, or refuses to work, possession may be had without notice to quit on the order of two magistrates in petty sessions. The only provision in the Land Act affecting labourers' cottages is to take out the clause for compensation on eviction where the cottage allotment does not exceed one-quarter of an acre. As to what the Government could do to encourage the building of good cottages, I do not see that they could do more than facilitate the granting of loans to those landlords who are unable to meet the expenditure out of the income, which,

however, I think every landlord ought to be well able to do. There must be an Act passed to replace the Act of 1860, now expiring, and some stimulus might be given if the term of repayment was extended in the same way that it has been as to loans for the purchase of the tithe-rent charge; but then the reversion of the value of the building would be so far postponed that the landlord would probably charge the tenant with the whole of the annual payment. The conditions for the loan ought to be that the cottages should be built permanently and well, with stone walls and slate roofs, and the upper floor ceiled. Where these conditions are observed, the borrower should have ample latitude to vary the construction as may best suit his own ideas. There is much unnecessary delay in satisfying the technical or legal requirements of the Board of Works, especially the lodgment of the landlord's title deeds, which might, I think, be fairly dispensed with, as the land is liable to the charge for the buildings, whoever may be owners or occupiers. Indeed I think that every farmer who holds above one hundred acres should have the power of borrowing from the Board of Works for the erection of one labourer's cottage to every fifty acres, exclusive of those intended for steward and herd. At present he would be enabled to get compensation under the Land Act for building cottages *suited to the holding* as he is for the erection of farm-offices; any objection to thus encouraging an excessive population would be easily limited under the control of the Board of Works. But there should, again, be some control over that body, as it is scarcely to be expected that officers on fixed salaries should not be rather averse to giving themselves additional trouble. I look upon this in a national point of view; for, as it is the interest of the community that the land should be brought into the most highly-productive state, the farmer ought not to be prevented from obtaining the means of cultivating it properly. The census, while minute and perhaps vexatious in recording the ages of old maids, has not yet given us the number of agricultural labourers in Ireland, a matter of paramount importance for us to know; but I rather think that if the quality were better, the quantity would be not more than sufficient to bring all the arable land into a fair state of cultivation. I wish I could make you feel as strongly as I feel that the prosperity of Ireland and of Irishmen depends on individual exertion—each man trying to do his duty in his own place. I wish I could persuade you that the destinies of this country are not in the hands of legislators to play with for party purposes, or of the corrupt and self-seeking agitators, whom for the last fifty years you have seen enough of to be able to see through, but that they are in your own hands, and lie at your own doors. Do not look abroad for faults and shortcomings in others. "Learn to improve yourselves to-day, and then improve your friends to-morrow." There is not a farmer in Ireland that has not the same opportunity of making his land productive enough to support himself, as well as the labourer in his employment in comfort and happiness, as they have in England and Scotland—the rents are lower, the soil and climate better. The demand for beef and mutton is greatly increasing, while, unfortunately, our stock seems to be diminishing. Lay yourselves out for breeding a much larger number, and then you will want more labour, and feel more strongly the direct interest you have yourselves in making the labourer happy and comfortable. We are too apt to think that each man should be for him-elf, and steadily pursue his own interests, but this is not the case. From the highest in the land to the lowest, there are a series of connecting links. We are all more or less dependent on each other for comfort and happiness, and should feel that our liberties under the constitution are the same, and that neither political nor religious differences should hinder our cordial co-operation in promoting each others' temporal welfare.

Mr. WEBBER (agent to Mr. Cosby, D.L.), said: I have been myself engaged in several cases building labourers' cottages, and I must say everything Mr. Hamilton has stated applies to the point most accurately. In order to have a good substantial cottage—and I am in favour of nothing that is not very substantial—his prices are not excessive for two labourers' cottages, which will repay these prices amply. We are all complaining that labour is scarce. That must continue to be a general complaint while we make use only of casual labour; but the complaint will no longer be heard if we keep permanent labourers. There will be no difficulty in getting permanent labourers if we provide them with comfortable houses,

and the farmer has an interest, perhaps greater almost than the landlord, in having good cottages on his farm for the labourers. Mr. Hamilton instances Lord Bessborough, on whose estates double cottages have been built for £90. I don't think that can be attained in the present day, for it will require at least £140 to build a pair of cottages—that is to build them in a permanent way. It is very desirable that landlords, in getting these cottages built, should consider not only the comfort of the labourer, but also the appearance of the estate—he should encourage a taste for tidiness and neatness in the occupant of the cottage. A small garden to each cottage encourages a great taste for these things in the labourer, making him tidy. I am sure I could make a great many more remarks on the subject if I went through the details of the paper, but I leave these few observations to you, hoping that some of you, gentlemen, may express opinions upon the subject.

Mr. HAMILTON: Perhaps I had better answer the question put. The subject is so great a one, and one must see going through the country great steps in the way of improvement; but at the same time I was not exactly applying what I said to this county as to my own county and other places, where I must say the eye of the traveller is constantly arrested by groups of hovels in which it is impossible for human beings to live, in health or in any degree of comfort. There is not a man who would put an animal upon whose profit he was relying into as bad a habitation as I could name in many, many parts of Ireland. Now, naturally, one would think, where we are bound by that institution under which it is supposed the majority have the power of controlling the minority in not exercising their rights so as to prejudice the rights of others, there ought to be a power to put a stop to such a state of things, which propagates disease in the body and discontent in the mind. Therefore, I have often thought that the provisions which the legislature applied in towns might be extended in a moderate degree to the country. In towns, Athy for instance, if there is a house which lets in water the town commissioners have the power to get an estimate of the repairing of that house, and if they furnish that estimate to the landlord and he does not do it they have the power of doing it themselves. We have been going through a state of transition, and I wish to avoid the danger of being too stringent on these points—the danger of evictions, in which case poor creatures have often to go into the poorhouse, or into towns, which I don't want to crowd too much. To advert to what I say as to my not proposing a measure of too stringent a character till we have passed through a few more years, I am not sure when, I trust soon, a power will be given to magistrates, with an appeal to quarter sessions, to act with respect to old tenements. Cases of that kind might be brought forward before the magistrates and adjudicated on, and thus get rid of what are a disgrace to any civilised country, those wretched hovels which are worse than anything provided for the most inferior animals. I look higher than this, although I don't think it does to go too far at once. I should be very glad, indeed, in good time to have a minister of agriculture and board of agriculture in the metropolis, and an inspector with that board for each county or poor law union if they choose to call it so. I would like to see some body with authority all over the country, constituting an executive acting with the local people in each district of the country; committees acting with agricultural societies such as we have; bodies using an authority delegated to them to put a stop to such outrages on humanity as are found to take place. Perhaps it would be too soon for that, perhaps not. I do not feel myself sufficiently able to suggest a scheme, but you can discuss what is best to be done, and let the Government know what we want to do. We can ask their help, which they can give by appointing proper officers who would communicate with the legal boards, and these boards would lend money were it would be necessary. We are but trying to get out of that state which is the greatest blot on this Christian country. Does that answer your question?

Mr. WEBBER: As far as I understand, it does; what is provided for the towns you would apply to the country.

Mr. HAMILTON: In a more modified way.

Mr. Low could hardly agree with Mr. Hamilton in ex-tolling the labourers in England and Scotland as far beyond the Irish labourers, which they were not. As far as his experience went, if the Irish labourers were well directed they

worked as well as the labourers in those countries north of south of the Tweed. When treated properly by his master the Irish labourer goes to his work cheerfully, and if he obtains a reasonable price he gives a fair day's work for a fair day's wage. In the West, where he at one time had considerable experience of labourers, labour was twenty-five per cent. cheaper than in either Scotland or England. Since he came to this part of the country he had to consider what it was that makes labour scarce and expensive, and he had made up his mind that it was from the want of labourers' cottages. And this want was strongly felt, notwithstanding that his Grace the Duke of Leinster, by the assistance of Mr. Hamilton, was building some. Consequently, the people were huddled into the towns, where they seem to lose that love for country they had so warmly while in their native places. Another thing which made labour expensive was because the labourer when he has done his day's work has to go into his house in Athy, Ballitore, or some other town; and on Sundays, perhaps, he spends his time there listening to the piper, and doing other things which make him unable to work next day. It will take some time, too, before they can overcome the labourers' feelings about the new cottages. It will take time to warm the house, as it were, and make them feel the same interest for the new house that they felt for the old. What injures the agricultural labourer is to send them into the towns. The wife need no longer make the cake, she can get the loaf next door, and she loses all her good habits of house-keeping. The labourers' cottages in the south and west were generally miserable little hovels, but lots of the nicest little children were brought up in them. Certainly he could never see there anything approaching what he might call the garden of Eden in Mr. Hamilton's own locality. In some parts, and where the best land in the country was to be found, the labourers were paid only in cows, milk, and things in kind. These are the most useless men Ireland possesses. People who have to work hard must be paid their wages honestly to enable them to live on proper food, which will give them more energy and more aptitude, and there will then be a greater bond of interest between the farmer and his labourer. As far as the inspection of houses goes, if a farmer has any interest at all in his farm he should see that his labourers are respectably housed, and that the cottages are respectably kept. And as far as extra labour is concerned that will regulate itself. Farmers who would have cottages on their farms for their labourers could have men sufficient for the work to be done employed all the year round, except during a busy time, when they could easily procure an extra man or two; there ought to be no difficulty at all in doing that.

Mr. O'NEILL said: I think the price of building labourers' cottages is a very important consideration. The price named by Mr. Hamilton appears to me to be very high. My attention was directed last summer to some buildings put up by Mr. Wakefield, and the material he used was Portland cement and gravel. The portion of cement in this concrete was one-seventh, and the remainder gravel. He made a frame the size of the wall he wanted, and the stuff was poured in by a labouring man. It hardened in a short time after being put in, and Mr. Wakefield says it is a cheap way of building walls. It strikes me this would be very applicable to labourers' cottages. When it is quite dry the frame is taken away. The same way the floors and halls are finished. And I can tell you neither a mouse nor a rat could get through it. The house does not require brickwork or stonework, and the lintels and window stools are all formed in the same way. It is far cheaper than the ordinary brickwork or stonework.

Mr. WEBBER: The process was invented by a gentleman named Tor, and Mr. Wakefield took the pattern from my brother, who adopted it at the Curragh. I myself have considered this matter very carefully, and I went into a calculation of what the cost would be in this country; and I discovered that the saving with regard to the cost of materials would not be so very great. We can get mason work done cheaper than they can in England, but we have to pay more for the Portland cement. There are several things to be taken into account. You must have suitable material to mix with the cement. If you cannot get good gravel, if it is not particularly clean, the concrete will be of a very inferior quality. You must have particularly clean sand—it may be coarse or it may be fine, but it must be clean before you can make good concrete. A substitute may be had in burnt clay,

which is not easily to be had in this country, but it is not so good as sand. Therefore, as the materials are not so easily procured in this country, there is no great saving by it. The method of building houses with this concrete has no doubt very great advantages, and there is no reason why a common labourer should not be taught to understand it. There are wooden moulds according to the size required, and these will do for a great number of cottages. The same frame does for all. It should be borne in mind that if the gravel or sand is not particularly clean, it will prove a failure.

Mr. HAMILTON: There is one difficulty which Mr. Webber did not refer to. In all that Mr. O'Neill said he was perfectly accurate. At the back of Mr. Martin's, at the North Wall, you will see offices put up by the inventor. He has been at great pains in doing the work well. He had steam engines employed in breaking up the gravel and giving a uniform mixture to the materials used. In the *Irish Builder* and other newspapers which refer to the building of cottages you will find, if the work is not done with the greatest care, the results are most disastrous, because when it dries, it dries in different portions, and the wall cracks asunder. Therefore it is I gave up the attempt to make a building by unskilled artisans or labourers, there being so much uniformity required in the whole process.

Dr. KYNSEY: I presume there is no use in directing attention backwards, to the time when all labourers' cabins were built with mud. I think good mud walls and good thatch make a perfectly healthy dwelling, and you have it for one-fourth what it costs to build such a cottage as Mr. Hamilton refers to. And you could afford to make them what a poor man's cabin ought to be—with a kitchen for the use of the family to cook in; a bedroom for the man and his wife; and bedrooms, which should necessarily be distinct, for the boys and girls. I often wonder that the morality of the people of this country is so good as it is. Why, in this very town, in the lodging-houses, I regret to say, there is such a mixture of the sexes in the rooms, that it is a wonder how they exist. Landlords and farmers can borrow money from the Government for building purposes. This is a very good thing on a small estate, or to an embarrassed landlord, and in that case cottages like those Mr. Hamilton speaks of could easily be built. But if the plan of building good mud houses were adopted occasionally it would be a move in the right direction. Then you could get the people who have been sent into towns during the last five and twenty years back again into the country, and by that means raise religion and morality, and raise the people, too, from the degraded state they have fallen into since they flocked into the towns. Then, as Mr. Hamilton says, I have not the least doubt, there will be plenty of labour. At present the labourer looks to America as his home. I would never wish to see our labouring classes leave their country, but when they do go to America, I would never wish to see them back again.

Mr. J. McCULLOCH said while other parties have been talking I have been working. My labourers, I am proud to say, are getting rich, and if I had a few more cottages I could do more. To every industrious labourer I have I give fair wages, and a cow to most if not to all of them.

Dr. KYNSEY: That is what would put an end to Fenianism if it was practised throughout the country.

Mr. McCULLOCH: There is no such thing as driving away the old labourer out of my employment. The oldest of them can do something or other—lead a horse, or something that way. There are labourers twenty and thirty years in my employment, and there is a young brood growing up.

Dr. KYNSEY: That is the great thing, when we have Fenianism on one side, Orangeism on the other, and scoundrelism everywhere. I am glad to see so many come together on an occasion like this, to hear something like common sense.

Rev. Mr. BAGOT said: There is one thing in the paper to which in ten years hence, perhaps, we may fairly take exception. In a tillage country it is a great mistake to talk of a percentage to be demanded from the tenant for his labourers' cottages. The labourers' cottage should be considered a necessary appendage to a farm. If any of us wanted to purchase a double-furrow plough from Mr. O'Neill, if it wanted certain wheels to make it complete, we would not take it. In the same way no man ought to take a farm which had not proper cottage accommodation on it. I do hope landlords and tenants themselves will do all in their power to wipe out of sight the

miserable hovels which one sees going through the country. I have been always a strong advocate for mud. It is a useful question for a landlord to consider whether he should build the walls of his cottages with mud or with stone. There is an instance not five miles from my place where a gentleman has a house, the walls of which are of mud, and which was built sixty years ago, and they are likely to last for three sixties more. It is an uncommonly comfortable house. But I do not agree with Dr. Kynsey that they ought to be thatched. They should be laid on a good stone foundation and should have a slated roof, for the days are gone by for thatch. Straw is too scarce and dear, and slates are by far the cheapest. I am sure the plans selected by the Duke of Leinster will be found most useful; they will be the means of spreading more information through the country; and when we see the prices for which these cottages may be built, many labourers will be housed in good substantial dwellings. I hope the day will soon pass by when we shall have to discuss the question what percentage the farmer will have to pay for the cottages on his farm.

Mr. WEBBER said: Dr. Kynsey and Mr. Bagot are both advocates for mud and economy, but I don't think either of their views could be carried out well. The warmth of a mud house altogether depends upon thatch. For that reason mud cottages would be most expensive, since the growth of wheat in this country is much less than it was.

Mr. BAGOT said: Mr. Bulwer told me he saved £70 in building a stall-feeding-shed of mud walls on a stone foundation. He built it properly, and covered the roof with slates.

Mr. Low wished to say a few words with reference to Mr. Bagot's simile of the double-furrow plough in connection with the taking of a farm, and wishing all the labourers' cottages to be built by the landlords, at no expense to the farmers. He did not think the farmers wanted that, and if they get these things done for them at the Board of Works' rate they would not object. If a landlord builds the cottage he raises the rent. If Mr. O'Neill sold a double-furrow plough which wanted some wheels he could not charge as much as if it did not want the wheels. As regarded the mud, that was a losing system, and could be carried out only where there was plenty of water; and where there was a damp locality they generally found brick-makers, and brick made a good deal drier, cleaner, and a cheaper house. With regard to concrete, where it was required only to build a large straight wall, it was an advantage to use that material, but when they came to put up small granaries and small out-offices he did not think it would do so very well. Where stone was scarce, and gravel good, and uniform walls to be built, concrete might be cheaper.

Mr. BAGOT said Mr. Wardropp put up a small house in Trinity College with concrete, and he did not think there was any saving over the stone-work. It would be useful information if, when Mr. Wakefield had finished his buildings, he published the results; and if he built with this material cheaper than with stone, manifestly it would be a good thing for building.

The CHAIRMAN said he thought this, like a great many other subjects, resolved itself into a question of pounds, shillings, and pence. On one side they had Mr. Bagot, who thought the landlords ought to do everything, and get nothing. Mr. Low was of opinion they should get something for their outlay. Men like himself, who had not very large incomes, could not lay out £140 on a double cottage without getting some benefit for his outlay. The landlord can at present borrow money at 6½ per cent. for twenty-one years. There might be an understanding that the tenant was to pay a part of the Government charge on the loan—that is, the tenant to pay a portion of 4 per cent., and allow the 2½ for sinking charges.

Mr. BAGOT said he hoped he had not been misunderstood by all the members of the Club, as he had been by the Chairman and one or two other gentlemen. What he intended to convey was, if they lived for ten years, when a person went to take a new farm he would find the cottages provided for him. He never meant to say that if cottages were built for a farmer on the farm he holds he was not to pay something, but when he applied for a farm the cottages would be there existing, and he would not hear anything about 4 per cent., but to pay the rent according to the increased value of his farm, by reason of those cottages.

A vote of thanks was passed to Mr. Hamilton.

CROMAR, UPPER DEE, AND DONSID AGRICULTURAL ASSOCIATION.

CATTLE, HORSES, SHEEP, AND PIGS.

At the last meeting, held at Tarland, Mr. DOUGLASS, Culsh, read the following paper on the Selection of Cattle, Horses, Sheep, and Pigs:

I shall commence my remarks by stating a few general rules to be observed by breeders of cattle, horses, sheep, or pigs, as I hold they are alike applicable in a greater or less degree to each of these classes of animals: (1), When there is a defect in the female, endeavour to put her to a male that is superior in that point where your female is defective; for example, if your females are deficient in size, get a strong male; female short in the body, a lengthy male; female long-legged, a short-legged male; female rough, male fine; and so forth. (2), The introduction of fresh blood from time to time. Though aware that Bates, Booth, and the Collisies held a different opinion, and were, under exceptional circumstances, successful, yet I think this by no means establishes the system as the safest and best one for general use, and I consider that the great preponderance of evidence adduced from experience establishes the fact that breeding from too close relationship in the long run is detrimental. (3), The particular breed of animals best suited for the farm or pasture must be judged of by the farmer or grazier according to the district and climate in which they are to be kept; but in breeding any of the animals, due weight ought to be given to the five general rules which formed the subject of discussion at our first meeting: 1, Pure blood; 2, a high strain of blood; 3, a sound constitution free of hereditary disease; 4, substance, symmetry, and quality; 5, a docile temper. As the object of the farmer that wishes to improve his stock is how to do so in the shortest possible time, and at the least outlay of money, though diverging perhaps from the subject proper, yet, as it is intimately connected with it, I shall make a single remark. As it is the general recognised maxim that the exterior form partakes more of the conformation of the sire than the dam, and as one sire will to some extent improve the whole of each year's stock, while a female gives but one superior beast, I would say procure superior males at whatever cost, and should they be too expensive for the size of the farm, let two or three farmers join in the purchase and keep of one animal. Commencing with the *Cattle*, I shall enumerate a few of the general points of excellence in a bull, whether black, polled, or short-horned. (1), A neatly formed head, clean in muzzle, broad between the eyes, prominent placid eyes, well set on ears; and in short-horned, a thick short flat horn, hanging downwards; a liver-coloured nose. (2), The neck clean, and tapering towards the head, and of an ordinary length. (3), The chest deep and wide, with a full bosom, affording plenty of space for the vital organs to discharge their duties. (4), A broad straight back, well arched ribs, strong in muscles above the knees, fine in the bone below the knee, plenty of flesh evenly laid on, a slack mellow skin with plenty of soft downy hair, a well set-on tail, not too thick, and a good toncher. These, I believe, form the leading characteristics of an animal easily kept, and which arrives at early maturity; but to complete the improvement of the stock, it is necessary to pick up superior females as fast as possible, and in doing so, with good sires, and with proper care and attention, the stock will soon gain for itself a name. I do not enter upon the merits of the different breeds of cattle, as I consider doing so would be unnecessary, after last night's discussion. *Sheep*: I do not consider it necessary to discuss the merits of the various breeds of sheep, inasmuch as there are only two breeds, or the cross between them, suitable for this district. I refer to the blackfaced breed for our hills, and the Leicester for our arable land. Of these two breeds, there are not a few points of resemblance. For instance, the formation of the head I hold to be a point of first importance in either a blackfaced or a Leicester sheep—a well-formed head, rather long below the eyes, fine in the muzzle, neat in the crown of the head, the ears not too far back towards the neck; if horned, the horns open, and flat in the crown of the head, the neck

of an ordinary length, deep and wide in the chest, deep in the flank, broad, long, and straight in the back, broad in the thighs, plenty of soft wool, plenty of evenly laid on flesh, a placid eye, and a long strong tail. These are what I consider a few of the chief points of a good sheep, and, as to the breeding of them, the same rules are alike applicable to them as to cattle, in regard to fresh blood. *Pigs*: I do not consider myself in the least qualified to express an opinion in regard to these animals, as I have had very little experience in pig-breeding; but the little I have had, and the experience of breeders I have read, convince me that the disappointments which breeders of cattle and sheep are subjected to in breeding are not equal to those of breeders of pigs. (1), It is rarely, if ever, that a litter of pigs partake of the shapes of the sire and dam in one and the same pig, as it will not unfrequently be found that in one litter of pigs so many will resemble the male in colour and shape, and so many the female, if their shapes and colour are different, so that there is no real amalgamation of the parents in the progeny, the inferior points of the one not being counteracted by the superior points of the other. (2), A second difficulty, insurmountable in the pigs and in every animal which usually breeds a number of young at one birth, arises, and that is, if the sow has for the first time been put to a male of a different breed from herself, she will never breed pure stock again, or at least stock that can be depended on as pure. I need not speculate on the reasons of this impurity of breed; it is sufficient to record the fact; and it must be obvious that breeders of pigs labour under serious disadvantages in trying to improve their breed of pigs. I shall, in closing this part of my subject, briefly state a few good points in pigs: a fine head, with a pretty short, well-tapered snout; flat, broad forehead; neat ears, well set on, and not too long; a broad neck, reaching forward to the back of the ears; a long, straight, broad back; deep, well-ribbed side; small bone below the knee; and fine soft birse. These I take as a few shapes of the easily fattened, well weighing pig. *Horses*: There is a greater difficulty in dealing successfully with this branch of the subject than with the other classes of animals I have referred to, for two reasons: (1.) Almost every person professes to be a judge of a horse; in my humble opinion, very few are. (2.) It is for either one of two purposes you want the former animals, either breeding or feeding; whereas, the horse is required for a variety of purposes, and the shapes that would be his chief recommendation for one sort of work would be a disqualification for another kind of work. What do you want to breed your horses for? Farm work, or harness with a little farm work, or is it exclusively for harness? The question arises, Is it for light or heavy harness, or is it for the saddle, or the saddle and harness combined? the worst horse to find or breed of any. I shall, however, confine my remarks to some general qualities in a greater or less degree applicable to the selection and breeding of three classes of horses: (1.) The horse for farm work proper, distinguished from carting work. (2.) The horse for harness, combined with some light farm work. (3.) Ponies, or light saddle horses. Without going into detail as to the various points, I shall mention a few leading shapes in a horse for each of the three kinds of work I have enumerated, which, with more or less modification, may qualify him for its performance. (1.) If you want speed in a horse, select an animal that bears the nearest resemblance to the shape of the greyhound in its formation. (2.) If you want strength, for slow work, select an animal with a large amount of propelling power. (3.) If you want a horse for long endurance, at either fast or slow work, only an animal with a good constitution can stand out well. The farm horse should have a comely head, but not so small as the running horse, as it enables him to throw more weight into the collar; broad and flat in the forehead; neat, well set-on ears; prominent placid eyes; thin eyelids; large nostrils; neck neat, and deep towards the chest; not very high in the

withers; upright shoulders; broad forearm; broad flat bone below the knee; rather short pasterns; good round feet, neither too flat nor too upright; and, I should say, plenty of hoof, but not hairy-legged; the back straight; the loins strong; the ribs well arched, and long on the back rib; long in the quarter, but not too broad in hooks; the haunch strong; the hip well down; broad hock joint, free of curb or bog or bone-spavin, splint or side bones. A horse with plenty of well-developed muscle, and a good constitution, is likely to endure a good deal of fatigue, and is not ill to keep. (2.) A harness and light farm work horse. The head rather smaller than that of the work horse; the neck longer, and withers higher; the shoulders more slanted to enable him to put out his feet farther before him, as well as to save concussion by running on the hard roads; chest flatter; the back, if anything, longer; loins strong; long in the hind quarters; the tail well set on; strong in the haunches; broad, and a little more bent at the hock joint; broad and flat below the knees; straight in forelegs; good round feet and plenty of crust, but not stripped; the legs well set under him; well ribbed home; deep at flank and not too thick in the hair; nostril large, but thin; prominent placid eyes; a large low set gullt, and wide between the shear bones, &c. (3.) Pony or saddle horse. A small well-formed head; neat, well set on, sharp pointed ears; broad forehead; prominent placid eyes, thin eyelids; large in the nostrils; wide and thin in the shear bones; long tapering neck well set on; withers high, and spring far back, and shoulders well slanted; chest pretty flat,

rather than round; short straight back; long in the quarter; strong above the knees before and behind; good hock joint; hip well down; thin flat bone below the knee; legs well set under, and good feet; strong above the kidneys; pretty long in the back rib; rather round than square on the top of the hind quarters; pretty long in the pastern joint; and free of curb, corns, bog and bone-spavin, side bones or ring-bone; and with all, good eyesight. In conclusion, I would, in a word, say: (1.) That the breed of horses best adapted for farm work is the old Scotch breed, such as was to be found in some parts of Aberdeen, Perth, and Forfarshires some forty years ago. I do not approve of the Clydesdale breed for general farm work. They may be good for carters, if they could be got with good fore feet, but there is scarcely one of them free of side bones; besides their hairy legs produce what is termed dry grease. No doubt they are strong but they are ill to keep. What a farmer requires is a short-legged, short-backed, barrel, easily kept, active horse, and the breed referred to, although now difficult to get, they, more than any other that I am aware of, combine these qualities. (2.) For light farm work and harness, I would consider the old strong cob horse, as yet unequalled by any breed of horses in the world for the work indicated, the best, but as we live in the days of fast travelling, if a fourth or eighth part of breeding were introduced, increased speed would be obtained. (3.) For hill ponies, our old Highland ponies, none better; but in ponies for other purposes, a little breeding would be an improvement.

THE STAFFORDSHIRE CHAMBER OF AGRICULTURE.

At the dinner, at Stafford, Mr. T. Neville, President of the chamber, in the chair,

The Earl of LICHFIELD for one had always said how strongly he objected to the idea of legislative interference on the subject of land tenure, but he had also equally held the opinion that if some change was not produced by the conduct of the great landowners in this respect, legislative interference would, sooner or later, become necessary. But that there was not the slightest occasion for it he had already said, and he still held to that opinion.

Mr. MONTON, M.P., said some persons were in favour of long leases, but to this he contended there were great objections, and many farmers, he believed, thought the same. Others wished the security to take the form of compensation for unexhausted improvements, and he himself thought that this plan would be the best. He was no great game-preserver himself—he would rather see a good fox found than any number of partridges, but he should be sorry to see the utter extinction of hares and rabbits. He thought such matters should form the subject of contract between landlord and tenant, and he should be sorry to see any restriction upon contracts between them (cries of hear, hear, and no, no).

The CHAIRMAN thought it very unjust that the expense of maintaining the poor, and of gaols, asylums, and other public objects, should be charged almost exclusively on one description of property. Recently the education rate had been added to the other burdens imposed upon the owners and occupiers of real property, and it was not improbable that they would soon have a highway rate. To show the injustice of the present system, he instanced the case of an owner of cottage property whose rents amounted to £50 a year, out of which he had to pay £25 annually as interest on the mortgage debt. The owner, though thus receiving only £25 a year, was assessed upon the £50 to all the local burdens, while the mortgage paid not a single farthing upon the £25 which he received. With reference to contagious diseases, he believed that farmers would eventually get all they required—a water-side market for the slaughter of foreign cattle. On the subject of the malt tax, the chairman said he had always been an advocate of repeal, believing that the tax was decidedly unjust and a great burden to the agriculturist. He hoped that the Chambers of Agriculture would not rest until this burden had been got rid of.

Mr. MASEEN said with regard to foreign cattle and contagious diseases, he was very far from wishing to prevent the

importation of animals from abroad, but it was impossible to over-estimate the loss which accrued from the widespread distribution of disease among our home-bred cattle. He would give any gentleman the name of a respectable man, a neighbour of his, who, during the last twenty years, had lost not merely scores or hundreds, but hundreds of hundreds of cattle from disease. Farmers had been most unjustly taunted with desiring protection against foreign competition; all they wanted was protection against foreign diseases. Farmers had suffered greatly from the adulteration of manures, oilcake, and seed; and, with the view of affording the members the means of detecting fraud, the Staffordshire Chamber had recently appointed an analytical chemist, whose services might be secured on very reasonable terms. With regard to the malt tax, Mr. Cobden was so convinced of the injustice of the tax that he declared it could not survive the abolition of the corn laws a single year. Nearly a quarter of a century had elapsed since then, and still the obnoxious impost remained. A most important matter which had occupied the attention of the Chamber was the consideration of the causes which discourage the application of capital to agriculture. These, the Chamber considered, were the undue amount of taxation, the uncertainty of tenure, and, therefore, of compensation for unexhausted improvements, and unnecessary restrictions as to cropping. On the subject of the uncertainty of tenure, he considered that some change was imperatively required. At present, a tenant had no claim for the value of unexhausted improvements, except by special agreement. In reply to an observation which had been made by Lord Lichfield, he might remark that in certain counties of England they never heard the voice of complaint raised as to insecurity of tenure, for in those counties there was a custom which had the force of law. And it was a curious fact that those were the counties which were always put forward as models of agriculture, showing that security of tenure encouraged the investment of capital in farm improvements. He would merely ask Lord Lichfield whether the farmers of Staffordshire asked for more than those in other counties were asking?

Lord LICHFIELD said he did not suggest that they were asking more than was reasonable. He merely wanted to know what they did ask.

Mr. MASEEN said on the subject of game the Central Chamber was in favour of hares and rabbits being struck out of the game list. He knew perfectly well that political capital was

often made of this game question, and he had always fought rather shy of it, looking to public opinion more than anything else. He must, however, mention one cause of complaint which farmers had—viz., that when any little difference occurred with the gamekeeper the assertions of the latter were too often believed, and those of the farmer—who, to say the least, was equally respectable, equally truthful, and equally independent—disbelieved. With reference to restrictions as to cropping, he believed that they were in most cases injurious alike to the landlord and the tenant, and that judicious conduct on the part of land agents would tend to remove most of

the difficulties attending this matter. With respect to the condition of the agricultural labourer, much might be done to improve his condition. Mr. Essington had, however, reminded them of a truth which had not been sufficiently considered when farmers were blamed for the ignorance of the labourer. The farmers and other residents in the country had to pay for the education of the labourers' children, but the best of them as they grew up went to the large towns, or emigrated, while the drones remained dependent upon the farmers not only for employment in health, but in many cases for support in old age.

AGRICULTURAL REPORTS.

CUMBERLAND.

The year 1871 has now become a matter of history, and ended, as regards weather, as it had continued for several weeks before its close, exceedingly wet, rain having fallen almost daily, which continued during the whole of January; so as to almost entirely put a stop to farm work, and to cause a great breadth of land, intended for wheat, to remain unseeded. The present month having been much more favourable, a good deal of wheat has been sown; but there is a considerable extent of land yet to finish. Should the season prove a favourable one, the crop may after all turn out well. The spring-sown wheat for the last two or three years proved good both as to quality and yield, but spring wheat generally depends more upon seasons than that earlier got in. The early-sown is exceedingly forward, even that put in after Martinmas looks quite luxuriant. The samples brought forward are in very bad condition, and the market continues very steady in price. The ploughing of stubble land got sadly into arrears, but has been progressing well lately. Some lea land for spring corn got turned over, but even that work was very much retarded by the weather. Most of the turnips, intended to be carted off the land, were fortunately removed before the weather became so very bad, otherwise they could not have been got off. It was very unfavourable for sheep feeding on turnips on the land, as they had to wade constantly in mire, except where the turnips grew on very dry soil, or were carted on to lea ground to be consumed. Notwithstanding these drawbacks turningip sheep has been paying well for the speculation, the high price of wool having improved the demand for sheep. The price of cattle still ranges very high at the sales of farm stock, which have recently taken place, and horses have been bringing higher prices than ever before known, especially agricultural and cart horses for the dray or heavy work, and even inferior animals are being bought at something like double the price they would have reached some years since. Fodder continues plentiful, cattle consequently will turn out in good condition when the spring markets commence. Potatoes are abundant, notwithstanding the disease. The price of pork, for curing, has improved since the curing season began.—Feb. 23.

SOUTH LINCOLNSHIRE.

We have not much to report upon at this season of the year. The business of the farm is almost *nil*. Our farmers are waiting for a few dry days, in order to get on with their ploughing and preparation for spring-sowing and potato planting. At present the land is too wet, and as cartage of manure and other leading work is done we have only stock management, thrashing, and the dressing of potatoes for the employment of our labourers. All are anxious to commence tillage operations, as this kind of work is very backward; but as the teams will be at liberty when the weather is suitable, no time will be lost, and the work will proceed rapidly. Some of the turnip and coleseed lauds have been ploughed up for seeding, but they present a wet and tough appearance, and will require a frost to put them right. The abundance of stock food is very satisfactory, and causes the price of cattle and sheep to rule very high. In the neighbouring county of Norfolk hundreds of acres of fine turnips would be thankfully given away to any flock-master who would undertake to find sheep to eat them off. We never saw our flocks in a more satis-

factory state at this season. They have done well, and the losses have not been great. The lambing season has just commenced, and we anticipate a healthy and good fall of lambs. It is unpardonable not to be prepared for every contingency, notwithstanding the present foul weather. The wheat plant never looked better: every field is blooming, and no loss of plant to be seen, either from weather or insects. The potato lands sown with wheat are very fine. The only kinds of stock to be bought at a moderate price are pigs, and they are abundant: very many are fattening, which must ultimately tell upon the price of other meats, as pork is selling at about 3s. per stone less money than beef or mutton. Our labourers are about to agitate for the nine hours' labour movement. At one meeting 3s. per day has been fixed upon as the price of a day's wages. There will in all probability be a compromise, and 2s. 6d. per day will be given for nine hours' labour, exclusive of one hour for dinner. The present price is 2s. 3d. for nine hours, and 2s. 6d. ten hours.

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The cattle trade during the month has been rather unsettled. At one time a fair amount of firmness has prevailed, but this has, in turn, been succeeded by heaviness. Foreign stock has been moderately well represented. From our own grazing districts there has been a fair average supply, and owing to the abundance of grass in the pastures the quality of the beasts has been excellent. The weather generally has not been favourable for killing, and this circumstance has contributed to check activity. The best Scots and crosses were at one time making 5s. 4d. to 5s. 6d., but the price has since fallen to 5s. 2d. to 5s. 4d. per 8lbs.

As regards sheep the supplies have been fairly extensive, and have included some excellent breeds. A moderate amount of business has been transacted, and on the whole prices have ruled firm. The best Downs and half-breds in the wool have made 7s. 2d. to 7s. 4d., out of the wool 5s. 10d. to 6s. per 8lbs.

A few lambs have been brought forward, and they have been disposed of at the high rate of 10s. per 8lbs.

Calves have been in moderate request, and pigs have sold slowly.

The total imports of foreign stock into London during the past month have been as follows:

	Head.
Beasts	3,485
Sheep	30,841
Calves	570
Pigs	90
Total	34,986
Corresponding period in 1871.....	16,157
” 1870.....	21,384
” 1869.....	27,988
” 1868.....	4,877
” 1867.....	26,206
” 1866.....	29,241
” 1865.....	22,904
” 1864.....	12,228
” 1863.....	10,500

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	Feb., 1872.	Feb., 1871.	Feb., 1870.	Feb., 1869.
Norfolk, Suffolk, Essex, and Cambridgeshire	7,750	8,050	6,200	5,555
Other parts of England	1,500	1,250	2,970	3,160
Scotland	692	878	875	1,848
Ireland	400	660	1,240	851

The total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month have been as under:

	Head.
Beasts	14,860
Sheep	80,320
Calves	978
Pigs	681

COMPARISON OF SUPPLIES.

Feb.	Beasts.	Sheep.	Calves.	Pigs.
1871	15,325	72,690	644	525
1870	16,322	104,186	858	350
1869	22,066	111,600	1,331	1,200
1868	16,840	83,450	593	1,670
1867	17,140	79,710	1,081	1,979
1866	21,240	85,070	1,125	1,215
1865	21,153	66,590	1,196	2,714

Beasts have sold at from 3s. 2d. to 5s. 6d., sheep 4s. 8d. to 7s. 4d., calves 4s. 6d., and pigs 3s. 8d. to 5s. per 8lbs. to sink the offal.

COMPARISON OF PRICES.

	Feb., 1871.			Feb., 1870.		
	s.	d.	s. d.	s.	d.	s. d.
Beef from	3	2	to 10	3	2	to 5 4
Mutton	3	4	to 6 0	3	4	to 6 0
Veal	3	8	to 5 6	4	2	to 6 4
Pork	3	6	to 5 2	4	6	to 5 10

	Feb., 1869.			Feb., 1868.		
	s.	d.	s. d.	s.	d.	s. d.
Beef from	3	4	to 5 8	3	2	to 4 10
Mutton	3	6	to 6 8	3	4	to 5 0
Veal	4	6	to 6 0	4	4	to 5 5
Pork	3	6	to 5 0	3	4	to 4 2

REVIEW OF THE GRAIN TRADE DURING THE PAST MONTH.

The extreme mildness which prevailed at the close of last month has been the ruling characteristic of its successor. A mild, humid atmosphere, with abundance of rain, has not improved the appearance of things, and although the young wheat plant has not sustained any damage, it cannot be said to look quite so promising as a short time back. A change is much needed, but at the same time violent fluctuations in the state of temperature are at present to be dreaded, inasmuch as the advent of a sharp and severe frost would undoubtedly cause serious injury to the young wheat-plant. The season, however, is now far advanced, and the plant will shortly have attained sufficient strength to enable it to withstand the vicissitudes of our insular climate. Preparations are being rapidly made for spring sowing, but the land is at present in such a sodden state that it is next to impossible to work it. A few days of dry weather would soon alter the phase of affairs, and enable farmers to commence their outdoor operations. In the pastures there is an abundance of grass, and no difficulty is experienced in obtaining sufficient food for cattle.

We cannot notice an appreciable alteration in the position of the trade. A fair business is doing in wheat, but the demand is almost entirely confined to actual requirements, the speculative element being still wanting. The quality of the produce has been very indifferent, and this has doubtless contributed to check any speculative inquiry. Fine samples of wheat, from their scarcity, have readily commanded extreme rates. Allowing that the value of inferior samples will be regulated by the actual deficiency in quality, and that this will form no just criterion of the real value of the wheat, that is to say of average samples, we believe that it will be found that the future tendency of

prices will be indicative of steadiness. The weekly imports of foreign wheat have been small, and home deliveries have at the same time been of a very moderate character; but a fair number of vessels has arrived off the coast, and thus has in some measure counterbalanced deficiencies in other quarters. It is, however, a fact of some importance, that the quantity of grain on passage at the present moment is less by some 450,000 qrs. than at the corresponding period last year, and it is shown that our stocks of foreign wheat do not so greatly exceed those of last year, whilst those of home-grown are considerably less. Arguing from these premises it is maintained that values must acquire a hardening tendency, and that fine wheat will gradually improve in value, but without sustaining any rapid upward movement. There is stillagoodsupply of wheat at Odessa, but the quality is so bad that a greater portion of it will be unfit for the present; indeed, it is stated that some vessels that had been chartered for spring shipment have been re-chartered. The exports from Odessa last year reached the heavy total of 2,476,446 qrs., against 2,032,500 qrs. in the previous year. The stock on the 1st February last was 812,520 qrs., against 498,584 qrs. at the corresponding period in 1871. The French demand has not yet wholly ceased, although it is much less extensive than heretofore. Whilst mentioning the French demand we may here state, that about two-and-a-half million quarters have been already withdrawn from producing countries, and it is not at all improbable that later on the effects of this drain will be more severely felt. On the other hand, however, with the present mild weather, the forward state of the wheat plant, has led to the anticipation of an early harvest in France, and this has had the effect of depressing prices. The weather will have great influence over the future course of the trade. A few cold days, with the prospect of frost would materially enhance values, whilst with a continuance of the mildness the upward movement would necessarily be slow. In the German ports the supplies are by no means extensive, and, in addition, it is stated that there is a good home demand. From Australia we learn that the yield of wheat will average from six to seven bushels, and that about 60,000 tons will be available for export to Europe.

In the flour trade there has been no feature. Business has been only to a moderate extent in both English and foreign samples, and prices have been without change.

The spring corn trade has been quiet. For malting barley the demand has been less active, but prices have ruled firm. Grinding sorts have been rather easier. For oats, the show of which has been good, there has been very little inquiry, and inferior samples have been decidedly easier. Beans and peas have commanded but little attention, and maize has been neglected.

IMPORTS AND EXPORTS OF GRAIN.

The following statement shows the imports and exports of grain into and from the United Kingdom since harvest, viz., from the 26th of August to the close of last week:

IMPORTS.

	1871-2.	1870-1.	1869-70.	1868-9.
	Cwt.	Cwt.	Cwt.	Cwt.
Wheat	21,481,367	16,272,207	23,132,019	14,320,283
Barley	5,767,814	3,961,950	3,956,720	6,052,148
Oats	4,548,256	4,096,210	5,488,976	3,205,228
Peas	411,788	391,295	727,872	727,542
Beans	1,743,977	801,284	963,080	1,565,828
Indian Corn	9,370,236	8,071,404	10,211,389	6,804,435
Flour	1,659,336	2,299,193	3,480,878	1,971,828

EXPORTS.

Wheat	1,934,648	1,268,619	127,496	135,419
Barley	11,330	30,960	11,745	60,368
Oats	68,474	5,112,864	43,908	53,437
Peas	5,506	31,160	8,390	5,944
Beans	1,754	5,597	1,167	3,065
Indian Corn	18,684	40,729	9,414	522
Flour	37,427	855,517	9,085	19,685

On the Continent the grain trade has been quiet in tone, and in France values have been unsettled. In America there has been a moderate amount of animation. The exports of wheat from the United States to the United Kingdom, from the 1st of September to the 1st of February, were 1,174,725 bushels, against 1,474,725 bushels in the corresponding period in 1870-71.

QUANTITY OF GRAIN IN SIGHT AT NEW YORK, FEB. 10, 1872.

	WHEAT. Bush.	CORN. Bush.	OATS. Bush.
In store at New York	3,288,384 ...	814,701 ...	2,561,991
" Albany	13,000 ...	25,600 ...	188, 00
" Buffalo	681,328 ...	539,760 ...	407,439
" Chicago*	1,610,981 ...	5,530,829 ...	1,147,835
" Milwaukee	1,558,010 ...	107,260 ...	107,854
" Duluth	18,900 ...	— ...	—
" Toledo, Jan. 6... ..	448,094 ...	392,802 ...	265,105
" Detroit	174,081 ...	36,693 ...	156,139
" Oswego, Dec. 1	736,582 ...	227,949 ...	299,487
" St. Louis	416,751 ...	240,741 ...	213,421
" Boston	11,709 ...	324,714 ...	217,165
" Toronto, Jan. 15	48,214 ...	1,324 ...	57,874
" Montreal, Jan. 15	282,499 ...	152,572 ...	14,076
" Philadelphia*	320,010 ...	190,110 ...	301,100
" Baltimore*	160,000 ...	290,010 ...	85,110
Amount in New York canals	118,203 ...	1,033,212 ...	623,075
Rail shipments for week... ..	33,357 ...	530,934 ...	47,457
Total	10,950,083 ...	10,473,150 ...	6,601,998
Total in store and in transit, Jan. 20, 1872,	10,966,172 ...	9,418,248 ...	6,638,775
Ditto, Jan. 13, 1872	10,655,402 ...	8,939,529 ...	6,666,702
Ditto, Jan. 6, 1872	10,844,473 ...	8,330,627 ...	6,469,217
Ditto, Dec. 30, 1871	10,801,463 ...	7,617,461 ...	6,217,291
Ditto, Jan. 28, 1871	10,706,403 ...	3,456,241 ...	3,176,922

* Estimated.

BARNESLEY HORSE AND CATTLE FAIR.—Owing to the fine weather there was a very good attendance at our fair to-day (Wednesday). There has been a much better show of good horses than for some years past, and for really first-class animals excellent prices were realised. The best draught sold at £65 to £80, secondary qualities £35 to £50, and ordinary animals, suitable for light work, £15 to £25. In horned cattle the number shown were scarcely of an average character, but excellent prices were realised. In-calf and newly-calved cows realised £18 to £28, heifers £16 to £21, and Irish do. £14 to £18. A fair number of pigs were on the ground, but late price were barely maintained. Suckers sold at 20s. to 25s., stores 30s. to 45s., and strong do. 50s. to 65s. each. Bacon pigs sold at 6s. 9d. to 7s per stone.

COCKERMOUTH HORSE FAIR.—The February fair for horses took place at Cokermonth on Monday. The following is an average of the prices obtained: Harness and hunting horses £20 to £60, agricultural horses £30 to 70 gs., good ponies £20 to £30, pit ponies £16 to £18.

EAST ILSEY SHEEP FAIR.—At the sheep market on Wednesday, which is one of the largest in the country, unusually high prices were realised. There was a moderate number penned, and a large attendance of buyers from the metropolis and different parts of the provinces. Tegs sold at 60s. to 77s. per head. A farmer in that neighbourhood had 100 tegs at the market, and asked 80s. each for them. They were sold at 77s. each.

LINCOLN FAT STOCK MARKET.—A large show of cattle, and small one of sheep; a good demand for all kinds, at last week's prices. Mr. Richardson sold by auction 52 fat beasts, 289 sheep, 34 fat pigs, and 20 hogs, which average 75s. 6d. each.

PENISTONE FAIR.—The annual February cattle fair was held on Thursday. A good show and a fair attendance of buyers, and good prices were made in all descriptions of stock. Milch and newly-calved cows made from £18 to £23 and up to £28 per head, heifers £14 to £18, and Irish ditto £12 to £16, barren cows £11 to £13, stirks £6 to £9, yearling calves £4 to £8, sucking ditto 30s. to 40s. There were only two pens of sheep on offer, and few buyers. Small pigs 19s. to 23s., strong stores 30s. to 66s. per head. Bacon and Pork 6s. 9d. to 7s. per 14 lbs.

SANDWICH FORTNIGHTLY FAT STOCK MARKET.—At market to-day there was a very good supply of sheep, but not many beasts; the trade was brisk. Pieces of mutton 7s. per stone, beef 12s. 6d. per score. No. of sheep at market 650, beasts 61.

SLEAFORD FAT STOCK MARKET, (Monday last.)—A large show of fat Sheep and Hogs, grand show of fat Beasts, fair supply of Pigs, all of which realised extreme prices. Mutton from 10d. to 1s. per lb., out of the wool 8d. to 8½d., Hogs from 57s. to 83s. each, Beef 9s. 6d. to 10s. per stone, Pork 7s. to 7s. 6d. per stone, in-calfers from £18 to £30 each.

Number sold by Mr. Law: Fat Sheep 403, Hogs 309, fat Beasts 79, in-calfers 11, Pigs 67, and 1 horse.

WHITCHURCH FAIR.—There was a considerable exhibition of horned stock, which maintained late high prices. Beef 7d. to 8½d., Mutton 9d. to 10d. per lb.

WIGTOWN HORSE FAIR.—This old-established fair for horses was held on Tuesday last, when there was a larger attendance both of buyers and sellers than might have been anticipated, seeing that the bulk of the good horses in the county are bought up before the fair. Prices were very high for every class of animals, and the fair was a quick-selling one, especially for anything at all approaching to good. It being the usual weekly market, the town was very busy.

HOP MARKET.

BOROUGH, MONDAY, Feb. 26.—There is no new feature to remark in our market. The absence of demand reported in our last still prevails, and a slight decline is noticeable. Some holders are confident that by waiting full values will be obtainable; others, more anxious, endeavour to induce buyers by reductions. The same applies to yearlings, for which at present there is no demand. Continental markets are quiet. Latest advices from New York report more activity for fine hops.

Mid. and East Kent	£10 10	£12 12	£17 0
Weald of Kent	8 10	9 9	10 10
Sussex	7 15	8 8	9 9
Farnham and country ...	11 11	13 0	16 0
YEARLINGS.			
Mid and East Kent	£3 0	£4 4	£6 10
Weald of Kent	3 0	4 0	5 15
Sussex	3 0	3 10	5 5
Farnham and country ...	—	6 0	7 0

SALE OF SHORTHORNS AT FORRES.—The third annual sale under the auspices of the Forres and Northern Fat Cattle Club was held in the Agricultural Hall, Forres. The attendance of agriculturists was large, and the stock, on the whole, worthy of the county. Thirty-five young Shorthorn bulls from eight different herds were catalogued, and from some of the same stock a few heifers were forwarded, besides eight Highlanders from the byres of Lord Seafield at Castle Grant, Strathspey. The order of sale was determined by ballot, and the lots from Newton of Struthers, belonging to Mr. Bruce, came first. He had five yearling bulls in the sale-ring, the first-mentioned two of which were after his Scotsman, bred at Dalkeith Barg; the next one—Red Prince—being after Lord Eskdale, also bred by the Duke of Buccleuch; the other two descending directly from bulls reared by Mr. Fawkes of Farnley Hall, and Mr. Wood, Stanwick Park. The average price of Mr. Bruce's bulls was £37 12s. Scotsmen III. was secured for one of the leading breeders in Aberdeenshire at 69 guineas. The Morayshire breeders have on many occasions gone to Aberdeenshire for Shorthorn bulls, but it is not often that the Aberdeenshire farmers return the compliment. The two bulls from Sunbank traced their descent from the late Inchbroom stock. Mr. Brown, Feddan, catalogued two red bulls lacking style so much that they failed to find purchasers. Mr. Lawson, Oldmills, was represented by fourteen well-bred young bulls. The sires of the Oldmills bulls were Glenlyon, a Retic bull, and Vampire, a Sittyten bull. The average price of the fourteen was about £28 10s. each. A pair of beautiful red bull calves were taken from the Duke of Richmond's herd at Gordon Castle. Having been carved last summer, they were too young to appear at the Gordon Castle sale in September last, and their youth still interfered with their sale to some extent, though their excellent quality and fine breeding recommended them. They were after Baron Colling, a bull now in the herd, and bred by Colonel Towneley, and averaged over £37 each. Mr. Scott's two bulls from St. Mary's, Orton, were bred from the Gordon Castle stock, and sold very well, averaging nearly £38 each. Mr. Geddes, Orbliston, exposed six heavy, well-shaped bulls. They were bred after the old bull Wizard, of the Keir stock. The Orbliston animals averaged about £31 each; and all the bulls sold realised about £33 a-head. Several cows and heifers from Newton of Struthers were taken in at the owner's reserved offer. Four Highland bulls, and as many heifers, from the stock of the Earl of Seafield, Castle Grant, and after Perthshire bulls, sold readily at fair prices. Mr. Ross, Forres, was the auctioneer.

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

Happily the heavy rains of last January have not been followed up on February, though the month is generally wet; yet with increased solar heat vegetation has been much favoured, but the latter part of the month had some salutary checks by frost, the thermometer being once down to 27 degrees. The same changes it appears have occurred on the continent of Europe, and Danzig has had a slight fall of snow. In all these varieties of weather, however, there have been no complaints of the growing crops, either in England or elsewhere, and the wheat-plant where early sown is now strong and forward, and may have an early gathering, although it must be partial, as many lands were not sown in autumn. The light soils have already become capable of tillage, but some time as well as a succession of drying winds must be experienced before the Lent corn can be well got in. The grass as well as the young wheat looks well, and if no adverse times are ahead we may have another good hay crop and a fair subsequent bite for cattle, though it must, we fear, be some time before butcher's meat can be served to the public at moderate rates. The damp weather and shorter stores have very much reduced our weekly sales of wheat, which in four weeks have only been 215,611 qrs. against 306,295 qrs. in 1871, though prices have hardly undergone any change. But in France, the country to which all eyes had been turned, there has already been a heavy decline instead of the advance some were looking for; and as she has been making liberal shipments of spring corn here as well as elsewhere, it is pretty clear her rural population cannot be in the straits anticipated; and if this decline should continue it cannot fail, with so early a breaking of the frost, to affect the prices of Europe generally. Whatever may become of the American embargo there seems no anticipation that it will, for the present, involve the country in war, and it is hoped this dreadful alternative will be carefully avoided by professedly civilised and Christian states. But certainly, on the last prospect of its breaking out the present inactivity in the trade would cease, and possibly large speculative movements take place at enhanced prices. But much yet must depend on the character of the season we are approaching, and though our stocks are at present heavy, and more may yet be expected from Russia, this is the only country likely to yield large and continuous supplies, and even there, so much has been housed of inferior quality that we need not look for heavy arrivals of fine. The following were the recently quoted prices of the places named: White Northern wheat at Paris 61s., red 58s., fine white at Bordeaux 57s. to 61s., Berdianski at Marseilles 55s. In Belgium rates were from 57s. 6d. 59s.; Zealand wheat at Amsterdam and Rotterdam 59s., American 60s., best red at Hambro' 61s.; wheat at Lausanne 59s., Porrentruy 50s. 6d. The best high-mixed at Danzig was still worth 63s., cost, freight, and insurance; red wheat at Cologne 55s., at Pesh in Hungary 51s. to 57s.; wheat at Odessa 38s. 6d. to 47s., Barletta at Naples 52s. 6d., at Valparaiso 60s. 6d., cost, freight, and insurance; wheat at Adelaide 40s., free on board; red at New York 53s. 6d. per 480lbs. (This month's review includes the last Monday in January and the first three Mondays in February.)

The first Monday in Mark Lane commenced on moderate arrivals of wheat, both English and foreign. The

shov from Essex and Kent during the morning was about the smallest since harvest, and in condition it was probably the worst. Small, therefore, as it was, it was quite neglected, though dry samples were much wanted, and would have readily sold at the previous rates, or perhaps even more money. Foreign in good condition was in fair demand at fully the former values, but low sorts were 1s. down. Floating cargoes were unaltered in value. With the weather in the country very rainy and bad for thrashing, but few samples were exhibited at the several markets, and those in bad order rather tended downwards in value, while dry occasionally brought higher rates, and at Newbury an advance of 1s. to 2s. per qr. was paid. Liverpool was unsettled on Tuesday, but rather firmer on the closing market. In Scotland not much difference in wheat was noted. Edinburgh was down 1s. per qr., and Glasgow was dull and without quotable change. The bad condition of Irish wheat at Dublin made business very slow, and foreign was also dull.

On the second Monday the English arrivals were very limited, but those from abroad were good, very few fresh samples were exhibited on the Essex and Kentish stands, and the want of dry qualities was again much felt, such fully maintaining their previous values. Good foreign, more especially American and Saxonska qualities, were in fair demand at previous rates; but inferior sorts were dull. With small arrivals of floating cargoes, prices were much as previously. The same sort of markets still ruled in the country, with unfavourable weather, farmers finding it useless to exhibit damp lots for sale, and prices kept nominally the same, though the scarcity of prime dry parcels occasionally caused a rise of 1s. per qr., as at Birmingham, Newbury, and Gloucester. Liverpool was without change on Tuesday, and 1d. per cental higher on Friday. Glasgow was dull, and Edinburgh cheaper for inferior sorts. Though but few samples of native wheat were offering at Dublin, buyers still held back in consequence of the poor condition, and even foreign sorts were dull.

On the third Monday there was another limited English supply, and but a moderate arrival of foreign. Again the Kentish and Essex stands were very scantily provided with fresh samples, and no improvement was apparent in the condition. Everything dry was in demand, at fully as much money; but the foreign trade, which was rather higher on the previous Friday, lost the improvement then noted, and less was doing. With several arrivals off the coast, there had been a fair demand for, the best dry samples, at unaltered rates. Though the weather this week was somewhat improved, and the light lands were much relieved by the comparative cessation of rain, there was not time enough for the stronger soils to dry or the atmosphere to effect much improvement. Damp samples were therefore again complained of in the country, with small deliveries; but where anything fine appeared it was caught up at fully the previous rates, or 1s. per qr. more, as at Birmingham, Market Rasen, Gloucester, &c. Liverpool showed no change through the week. At Edinburgh the wheat trade was unchanged, and Glasgow was rather firmer. Dublin noted a quiet state of trade; but occasionally 6d. per qr. more was paid for anything really good.

On the fourth Monday there was again very little English wheat in the returns, and the foreign supplies

were limited. Scarcely any dry wheat was to be found among the few fresh samples that were sent up from Kent and Essex. These commanded fully as much money. The remainder were mostly left on the stands unsold. With regard to foreign, the trade on the whole was limited, but the scarcity of red American enabled holders occasionally to realise 1s. per qr. advance, though low sorts of Russian could not be forced without some reduction. Floating cargoes of good quality were unaltered in value. This week in the country again showed the great want of fine samples, the entire quantity offering being very much below that of last year, and in some instances, where good dry samples were exhibited, they occasionally brought 1s. advance on previous rates, as at Stockton, Birmingham, Gainsbro', &c. Liverpool was very firm on Tuesday, the market on Friday was 1d. lower.

The arrivals into London for four weeks were 13,133 qrs. English, 56,706 qrs. foreign; against 26,754 qrs. English, 43,414 qrs. foreign for the same period last year. The London exports were 7,488 qrs. The London averages commenced and closed at 58s. 6d. The general averages opened at 55s. 8d., and closed at 55s. 4d. The imports into the kingdom for four weeks ending Feb. 10th, were 2,811,255 cwt. wheat, 188,949 cwt. flour; against 1,934,741 cwt. wheat, 246,083 cwt. flour in 1871.

There has been no change in the flour trade during the four weeks noted. The supplies of English make from the country have been very regular and good, and Norfolks all along have ranged 39s. per sack, the better marks being 2s. or 3s. per sack higher, and town qualities have remained 50s. per sack. The foreign arrivals have been scanty, as usual at this time of year, but the demand has not reached beyond a retail inquiry, the best qualities being only in request. Fine barrels being worth 30s. per barrels, which allows no profit on imports. The imports into London for four weeks were 73,867 sacks country, 4,891 sacks 5,688 barrels foreign, against 141,104 sacks English, 10,741 sacks 41,090 barrels in 1871, when the French demand was on, and the exports reached to 134,455 sacks.

The supply of maize, though not heavy, has reduced prices of this grain fully 1s. to 1s. 6d., as there has been a continuous fall in beans, and oats have become moderately priced, American fresh not being worth over 31s., fine yellow 32s., and white 33s. to 34s. The imports in four weeks have been 34,744 qrs., against 13,870 qrs. for the same period last year.

The barley trade throughout the four weeks has been slow, and only picked samples of English malting have maintained their value, say 41s. to 42s., French having lately come largely into competition of fair quality; and this secondary sort, in consequence of liberal arrivals, has given way 1s. to 2s., not being worth over 31s. to 33s., while low grinding has ruled dull, at a decline of about 6d. per qr., there yet being some quantity of discoloured in store not worth over 21s. per qr. The imports in four weeks for London were 10,803 qrs. British, 56,336 qrs. foreign; against 9,712 qrs. British, 29,853 qrs. foreign in 1871.

The malt trade has been steady through the month, without undergoing any change in value. Fair exports have continued, having reached to 2,552 qrs.

The oat trade has received increased supplies of foreign, in consequence of the extraordinary mildness of the weather, which has permitted some exports even from Riga. Prices therefore have gone down 1s. to 1s. 6d. on Swedish, Danish, and other sorts ex-ship, and 6d. to 1s. on the best Russian in granary, 38lbs. Swedes not being worth over 20s. 6d., and others in proportion to weight and condition. Even France and Belgium have been contributing

to these supplies, though at the commencement of 1871 so many were sent there. The imports into London for the four weeks were 1,737 qrs. of home-growth and 154,750 qrs. foreign, against 4,711 qrs. English, 30 qrs. Scotch, and 17,350 qrs. foreign for the same period in 1871.

As regards new English beans, with better supplies in but poor condition they have declined about 1s. 6d. per qr., and foreign have consequently been a very slow sale and rather lower, there being fair arrivals. The best small new are now only worth about 43s., ticks and maza-gans about 37s. The imports into London for four weeks were 5,784 qrs. English and 5,188 qrs. foreign, against 4,923 qrs. English and 6,658 qrs. foreign in 1871.

The mild weather has also somewhat lowered the value of peas, though there have been no foreign supplies. Duns are not worth over 37s., maples 38s. to 39s., white 40s. to 41s. warranted boilers. The imports into London were 3,087 qrs. English only, against 2,547 qrs. English and 128 qrs. foreign last year.

The wet state of the weather has quite prevented the sowing of cloverseed; it has given way rather in price; and the demand has scarcely commenced for spring fares.

CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.

	Shillings per Quarter.	
WHEAT, new, Essex and Kent, white.....	58 to 63	
" red	62 58	
Norfolk, Lincoln, and Yorksh., red.....	62 59	
BARLEY	30 to 32.....Chevalier, new 38 43	
Grinding.....29	29.....Distilling	51 34
MALT, Essex, Norfolk, and Suffolk	63 69	
Kingston, Ware, and town-made	63 69	
Brown	51 57	
RYE.....	36 38	
OATS, English, feed 23 to 26.....Potato.....	27 33	
Scotch, feed	00	
Irish, feed, white 21	24.....Fine.....	25 26
Ditto, black	19 21.....Potato.....	29 32
BEANS, Mazagan	33 34.....Ticks.....	33 34
Harrow	34 37.....Pigeon	38 41
PEAS, white, boilers. 37	40 Maple 37 to 38 Grey, new	33 34
FLOUR, per sack of 280lbs., best town households.....	45 50	
Best country households	40 44	
Norfolk and Suffolk	38 39	

FOREIGN GRAIN.

	Shillings per Quarter.	
WHEAT, Dantzie, mixed	59 to 62.....extra.....	64 to 65
Königsberg	58 62.....extra.....	62 64
Rostock	57 58.....fine	59 60
Silesian, red.....	56 53.....white	60 62
Pomera, Meckberg., and Uckermark.	red.....	56 58
Russian, hard, 45 to 47... St. Petersburg and Riga	50 51	
Danish and Holstein, red 54 58.....	American 57 59	
Chilian, white 62... Californian 62 ... Australian	62 64	
BARLEY, grinding 21 to 23.....distilling and malting	31 34	
OATS, Dutch, brewing and Poland 17 to 27.....feed	16 20	
Danish and Swedish, feed 19 to 20.....	Stralsund... 19 20	
Canada 18 to 19, Riga 18 to 20, Arch. 18 to 21, P'sbg.	19 21	
TARES, Spring, per qr..... small - 42.....large -	46 46	
BEANS, Friesland and Holstein	36 38	
Königsberg.....	33 to 36.....Egyptian	31 33
PEAS, feeding and maple.....	35 39.....fine boilers	37 40
INDIAN CORN, white.....	32 33.....yellow	30 31
FLOUR, per sack, French.....	00	Spanish, p. sack 00 00
American, per brl.....	24 25.....extra and d'ble.	27 29

IMPERIAL AVERAGES

For the week ended Feb. 17, 1872.

Wheat	45,746½ qrs.	55s. 7d.
Barley	57,503½ "	38s. 8d.
Oats	5,216 "	23s. 0d.

COMPARATIVE AVERAGES.

Years.	WHEAT.		BARLEY.		OATS.	
	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.
1868	48,451½	72 11	51,915½	42 9	12,296½	26 2
1869	61,102½	50 3	30,686½	47 0	5,883½	27 0
1870	51,039½	40 8	44,254½	34 2	5,393½	19 10
1871	78,736	53 11	53,861½	35 7	7,584½	23 7
1872	45,746½	55 7	57,603½	38 8	5,216	23 0

AVERAGES

FOR THE PAST SIX WEEKS:		Wheat.	Barley.	Oats.		
		s. d.	s. d.	s. d.		
Jan. 13, 1872.....	55	1	36	11	22	9
Jan. 20, 1872.....	55	8	37	2	22	6
Jan. 27, 1872.....	55	10	37	10	22	8
Feb. 3, 1872.....	56	0	38	2	22	6
Feb. 10, 1872.....	55	4	33	9	22	9
Feb. 17, 1872.....	55	7	33	8	23	0
Aggregate of the above.....	55	7	37	11	22	8
The same week in 1871.....	53	11	35	7	23	7

FLUCTUATIONS in the AVERAGE PRICE of WHEAT.

PRICE.	Jan. 13.	Jan. 20.	Jan. 27.	Feb. 3.	Feb. 10.	Feb. 17.
56s. 0d.
55s. 10d.
55s. 8d.
55s. 7d.
55s. 4d.
55s. 1d.

BRITISH SEEDS.

Mustard, per bushel, brown 14s. to 16s., white 7s. to 9s. 6d.	
Canary, per qr. ....new 50s. 54s. ....old 52s. 54s.	
Cloverseed, new red..... 80s. 110s.	
Coriander, per cwt..... 22s. 23s.	
Tares, winter, new, per bushel..... 5s. 3d. 5s. 6d.	
Trefoil, new..... 34s. 42s.	
Ryegrass, per qr. 34s. 38s.	
Linseed, per qr. Baltic 68s. to 70s., crushing 60s. 61s.	
Linseed Cakes, per ton..... £10 15s. to £12 0s.	
Rapeseed, per qr. 84s. 85s.	
Rape Cake, per ton £6 10s. 0d. to £7 0s. 0d.	
Cloverseed, red 56s. to 68s. ....white 76s. 86s.	
Hempseed, small 41s. to 42s. per qr. ....Dutch 45s. 46s.	
Trefoil 24s. 32s.	
Ryegrass, per qr. 34s. 38s.	
Linseed, per qr. Baltic 68s. to 62s. ....Bombay 68s. 6d. 64s.	
Linseed Cakes, per ton..... £10 15s. to £11 10s.	
Rape Cake, per ton £6 10s. to £7 0s.	
Rapeseed, Dutch..... 76s. 80s.	
Coriander, per cwt..... 23s. to 24s.	
Carraway ,, new..... 30s. 37s.	

FOREIGN SEEDS.

Mustard, per bushel, brown 14s. to 16s., white 7s. to 9s. 6d.	
Canary, per qr.new 50s. 54s.old 52s. 54s.	
Cloverseed, new red..... 80s. 110s.	
Coriander, per cwt..... 22s. 23s.	
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Rapeseed, Dutch..... 76s. 80s.	
Coriander, per cwt..... 23s. to 24s.	
Carraway ,, new..... 30s. 37s.	

POTATO MARKETS.

SOUTHWARK WATERSIDE.

LONDON, MONDAY, Feb. 26.—During the past week the arrivals coastwise have been limited, but still heavy by the rails. Trade continues in the same languid state at the following quotations:

Yorkshire Flukes.....	100s. to 140s.
Regents.....	60s. to 100s.
Dunbar and East Lothian Regents.....	100s. to 130s.
Perth, Forfar, and Fife.....	85s. to 105s.
" " Rocks.....	85s. to 95s.
Kent and Essex Regents.....	60s. to 100s.
" " Rocks.....	60s. to 80s.
French Whites.....	50s. to 65s.

BOROUGH AND SPITALFIELDS.

LONDON, MONDAY, Feb. 26.—The markets continue to be well supplied with Potatoes, the demand for which has been inactive at our quotations. The imports into London last week consisted of 87 tons from Dunkirk.

Regents.....	75s. to 120s.	per ton.
Rocks.....	75s. to 90s.	"
Flukes.....	100s. to 130s.	"
Victorias.....	100s. to 130s.	"

PRICES of BUTTER, CHEESE, HAMS, &c.

BUTTER, per cwt.:	s.	s.	CHEESE, per cwt.:	s.	s.
Dorset.....116 to 150			Cheshire.....	56	to 86
Friesland.....124	128		Dble. Glouce., new	62	76
Jersey.....104	120		Cheddar.....	72	94
Fresh, per doz. ...	15	13	American.....	56	74
BACON, per cwt.:			HAMS: York.....	82	94
Wiltshire, green ..	62	64	Cumberland.....	80	92
Irish, green, f.o.b.	62	66	Irish.....	90	100

POULTRY, &c., MARKETS.—Turkeys, 7s. to 14s.; Geese, 5s. to 7s.; Goslings, 7s. to 9s.; Ducks, 2s. 6d.; Wild Ducks, 3s.; Duckings, 4s. 6d. to 5s.; Surrey Poultry, 5s. to 8s.; Boston and Essex, 3s. to 4s.; Irish, 1s. 6d. to 3s.; Rabbits, tame, 1s. 6d. to 3s. 6d.; ditto, wild, 1s. to 1s. 4d.; Pigeons, 1s.; Hares, 4s. 6d. to 5s.; Widgeon, 1s. 6d. to 1s. 9d.; Teal, 1s. 6d.; Woodcocks, 4s. 6d.; Snipes, 1s. to 1s. 6d.; Larks, per dozen, 2s. 6d. to 2s. 9d.; Leverets, 3s. 6d.

COVENT GARDEN MARKET.

LONDON, FRIDAY, Feb. 23.

The markets have been rather quiet again during the last few days, and transactions among wholesale dealers have been somewhat limited. A fair attendance of retail customers has been observable, but no inquiries sufficient to lead to an advance in price has been the result. Importations are moderate, and arrive in good condition, comprising salading, Asparagus, and some good Easter Beurres Pears.

FRUIT.

		s. d.	s. d.	s. d.			
Apples, ¾ sieve.....	6	0	5	Melons, each.....	0	0	0
Cobs, ¾ doz. lb.....	63	0	65	Oranges, ¾ hundred	6	0	10
Figs, ¾ dozen.....	0	0	0	Peaches, ¾ dozen	0	0	0
Filberts, ¾ lb.....	5	8	1	Pears, ¾ dozen.....	4	0	8
Grapes, ¾ lb.....	5	0	10	Pine Apples, per lb.	6	0	10
Lemons, ¾ hundred.	7	0	10	Pomegranates, each.	0	4	8

VEGETABLES.

Artichokes, green, ea.	0	5	0	Leeks, per bunch	0	2	0
Asparagus, per hund.	6	0	8	Lettuces, per score	1	6	2
French, ditto.....	12	0	14	Mushrooms, ¾ pottle	1	0	2
Beet, per dozen.....	1	0	2	Onions, ¾ bunch.....	0	4	0
Broccoli, purple, ¾ bdl.	1	0	3	Parsley, per bunch	0	2	0
Brass Sprouts, ¾ sve.	1	5	2	Peas, new, ¾ punnet.....	0	3	0
Cabbages, per doz.....	1	10	3	Potatoes, new frame, B	0	2	0
Cardoons, each.....	2	0	4	Radishes, per bunch	0	2	0
Carrots, per bunch	0	5	0	French, ditto.....	0	4	0
French, ditto.....	1	0	1	Rhubarb, ¾ bundle.....	1	6	0
Onionflowers, per doz.	2	0	6	Salsify, ¾ bundle.....	0	3	0
Celery, ¾ bundle.....	1	0	2	Scorzonera, ¾ bundle	0	9	3
Cucumbers, each.....	2	0	3	Sea Kale, ¾ punnet	1	0	2
Fch Beans, new, ¼ 100	4	0	6	Shallots, ¾ lb.....	0	8	0
Herbs, per bunch.....	0	2	0	Spinach, per bushel	3	0	4
Horse-radish, ¾ bundle	3	0	5	Turnips, ¾ bunch.....	0	2	0
Potatoes: Regents, 100s. to 10s.; Flukes, 120s. to 150s.;				French Shawls, 56s. to 70s.			

HAY MARKETS.

SMITHFIELD.—The supplies to this market during the week have been large. The demand has been inactive, and prices in many instances have ruled easier. Prime clover, 110s. to 120s.; inferior ditto, 55s. to 90s.; prime hay, 77s. 6d. to 87s. 6d.; inferior ditto, 55s. to 65s.; and straw, 34s. to 40s. per load.

BICESTER, (Friday last).—Hay, old, £6 to £7; new, £3 10s. to £4 10s.; Straw, £1 15s. to £2 5s. per ton.

BIRMINGHAM, MONDAY, Feb. 19.—Hay, 80s. to 100s. per ton. Straw, 3s. to 3s. 5d. per cwt.

DERBY, (Tuesday last).—Hay, £5 to £5 15s.; Straw, £3 10s. to £4 per ton.

WORCESTER, (Wednesday last).—Hay, new, 80s. to 85s.; ditto, old, 90s. to 95s.; Straw, 45s. to 60s.

ENGLISH WOOL MARKETS.

LONDON, MONDAY, Feb. 26.—A good business has been doing in all descriptions of Wool. The choice qualities have commanded the larger share of attention, but other sorts have not been neglected; prices have ruled firm.

CURRENT PRICES of ENGLISH WOOL.

	s. d.	s. d.
FLEECES—Southdown hoggs..... per lb.	1	9½ to 1 10
Half-bred ditto	2	0½ to 2 3½
Kent fleeces	2	0
Southdown ewes and wethers ..	1	8
Leicester ditto	1	6
Prime.....	1	4
Choice	1	3
Super	1	2
Combing, wether mat.....	2	0
Picklock	1	8
Common	1	4
Hog matching.....	2	1
Picklock matching	1	7
Super ditto	1	4

MANURES.

Peruvian Guano, direct from importers' stores, £13 0s. per ton.	
Bones, crushed 4½, half-inch 2s 5s., bone dust, 2 0s. per ton.	
Co. polite, Cambridge (to London) white 2s 5s., ground 1s 15s., Suffolk white 2 10s., ground 2 10s.	
Nitrate of Soda, £7 per ton.	
Sulphate of Ammonia, £22 10s. to £24 per ton. Gypsum, £1 10s. per ton.	
Superphosphate of Lime, 25 5s. to 26 5s. per ton.	
Blood Manure, £6 10s. to £5 per ton. Dissolved Bones, £7 per ton.	
E. PURSER, London Manure Company, 116, Penchurch Street, E.C.	
Guano, Peruvian £12 17 6 to £20 0 0	Bone Ash..... £0 10 0 to £20 0 0
Linsd. Bomy, p. q. 3 4 6	3 5 6 Phosphate of Lime..... 0 1 2 0 1 3
Linsd. Cake, per ton.....	Nitr. 2 7 0 2 8 0
Amer., thin, bgs. 10 5 0	10 13 6 Nitr. of Soda, p. ct. 0 15 9 0 16 0
Cottd. Cake, decor. 8 0 0	8 10 0 German Kainit..... 3 5 0 3 15 0
Rapeseed, Guzerat 3 10 0	3 12 0 Tallow, 1st P.Y.C. 0 0 0
Cloverseed, N.A. 2 14 0	2 14 0 super. Norths 2 2 0 2 5 0

SAMUEL DOWNES AND CO., GENERAL BROKERS,

No. 7, The Albany, Liverpool.

Pretence's Cereal Manure for Corn Crops.....	per ton	£8	0	0
Mangold Manure.....	"	6	0	0
Pretence's Turnip Manure.....	"	6	10	0
Pretence's Superphosphate of Lime.....	"	0	0	0

Agricultural Chemical Works, Stowmarket Suffolk.

Printed by Rogerson and Tuxford, 265, Strand, London, W.C.

THE ROYAL FARMERS' INSURANCE COMPANY,

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1st Class—Not Hazardous	1s. 6d. per Cent.
2nd Class—Hazardous	2s. 6d. ”
3rd Class—Doubly Hazardous	4s. 6d. ”

BUILDINGS and MERCANTILE Property of every description in Public or Private Warehouses.—Distillers, Steam Engines, Goods in Boats or Canals, Ships in Port or Harbour, &c. &c., are Insured in this Office at moderate rates.

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IMPORTANT TO FLOCKMASTERS.

THOMAS BIGG, Agricultural and Veterinary Chemist, by Appointment to his late Royal Highness The Prince Consort, K.G., Leicester House, Great Dover Street, Borough, London, begs to call the attention of Farmers and Graziers to his valuable SHEEP and LAMB DIPPING COMPOSITION, which requires no Boiling, and may be used with Warm or Cold Water, for effectually destroying the Tick, Lice, and all other insects injurious to the Flock, preventing the alarming attacks of Fly and Shab, and cleansing and purifying the Skin, thereby greatly improving the Wool, both in quantity and quality, and highly contributing to the general health of the animal.

Prepared only by Thomas Bigg, Chemist, &c., at his Manufactory as above, and sold as follows, although any other quantity may be had, if required:—

4 lb. for 20 sheep, price, jar included.....	£0 2 0
6 lb. 30 ” ” ” ”	0 3 0
8 lb. 30 ” ” ” ”	0 4 0
10 lb. 50 ” ” ” ”	0 5 0
20 lb. 100 ” ” (Cask and measure included) ..	0 10 0
30 lb. 150 ” ” ” included) ..	0 15 0
40 lb. 200 ” ” ” ” ..	1 0 0
50 lb. 250 ” ” ” ” ..	1 3 6
60 lb. 300 ” ” ” ” ..	1 7 6
80 lb. 400 ” ” ” ” ..	1 17 6
100 lb. 500 ” ” ” ” ..	2 5 0

Should any Flockmaster prefer boiling the Composition, it will be equally effective.

MOST IMPORTANT CERTIFICATE.

From Mr. HERBATH, the celebrated Analytical Chemist:—Bristol Laboratory, Old Park, January 18th, 1861.

Sir,—I have submitted your Sheep Dipping Composition to analysis, and find that the ingredients are well blended, and the mixture neutral. If it is used according to the directions given, I feel satisfied, that while it effectually destroys vermin, it will not injure the hair roots (or “yolk”) in the skin, the fleece, or the carcase. I think it deserves the numerous testimonials published. I am, Sir, yours respectfully,

WILLIAM HERBATH, Sen., F.C.S., &c., &c.,
Professor of Chemistry.

To Mr. Thomas Bigg, Leicester House, Great Dover-street, Borough, London.

He would also especially call attention to his SPECIFIC, or LOTION, for the SCAB or SHAB, which will be found a certain remedy for eradicating that loathsome and ruinous disorder in Sheep, and which may be safely used in all climates, and at all seasons of the year, and to all descriptions of sheep, even ewes in lamb. Price FIVE SHILLINGS per gallon—sufficient on an average for thirty Sheep (according to the virulence of the disease); also in wine quart bottles, 1s. 3d. each.

IMPORTANT TESTIMONIAL.

“Scoulton, near Hingham, Norfolk, April 16th, 1855.

“Dear Sir,—In answer to yours of the 4th inst., which would have been replied to before this had I been at home, I have much pleasure in bearing testimony to the efficacy of your invaluable ‘Specific for the cure of Scab in Sheep.’ The 600 sheep were all dressed in August last with 84 gallons of the ‘Nox-poisonous Specific,’ that was so highly recommended at the Lincoln Show, and by their own dresser, the best attention being paid to the flock by my shepherd after dressing according to instructions left; but notwithstanding the Scab continued getting worse. Being determined to have the Scab cured if possible, I wrote to you for a supply of your Specific, which I received the following day; and although the weather was most severe in February during the dressing, your SPECIFIC proved itself an invaluable remedy, for in three weeks the Sheep were quite cured; and I am happy to say the young lambs are doing remarkably well at present. In conclusion, I believe it to be the safest and best remedy now in use.

“I remain, dear Sir,

“For JOHN TINGEY, Esq.,

“To Mr. Thomas Bigg.” “R. RENNEY.

Flockmasters would be well to beware of such preparations as “Non-poisonous Compositions:” it is only necessary to appeal to their good common sense and judgment to be thoroughly convinced that no “Non-poisonous” article can poison or destroy insect vermin, particularly such as the Tick, Lice, and Scab Parasites—creatures so tenacious of life. Such advertised preparations must be wholly useless, or they are not what they are represented to be.

DIPPING APPARATUS.....£14, £5, £4, & £3.

“There are very few simple articles of food which can boast so many valuable and important dietary properties as Cocoa. While acting on the nerves as a gentle stimulant, it provides the body with some of the purest elements of nutrition, and at the same time corrects and invigorates the action of the digestive organs. These beneficial effects depend in a great measure upon the manner of its preparation, but of late years such close attention has been given to the growth and treatment of Cocoa that there is no difficulty in securing it with every useful quality fully developed. The singular success which Mr. EPPS attained by his homœopathic preparation of Cocoa has never been surpassed by any experimentalist. Medical men of all shades of opinion have agreed in recommending it as the safest and most beneficial article of diet for persons of weak constitutions.”

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C O C C O A.

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No. 4, Vol. XLI.]

APRIL, 1872.

[THIRD SERIES.

FARMER'S MAGAZINE,

AND

MONTHLY JOURNAL

OF

THE AGRICULTURAL INTEREST.

Dedicated

TO THE

FARMERS OF THE UNITED KINGDOM.

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PATENT AMMONIA-FIXED GUANO,

Guaranteed to be made from the finest quality of Government Guano, as imported. Has produced equally as good results as the unfixed Guano, and is 30s. per ton cheaper. Recommended for all crops for which Guano is used, and is found superior to it for Potatoes, Mangold, Beet Root, &c. In districts where the rain-fall is above an average, we recommend it for Turnips. It is not only cheaper, but also much more effective than Nitrate of Soda, as Top Dressing, and its effects are more lasting, as may be seen by the after Crops.

Patent Ammoniated Phosphate. Dissolved Bones.
Superphosphate of Lime. Bone Manure for Turnips.
Blood Manure for Roots. Blood Manure for Corn.
Special Manures for Mangold, Barley, Grass, and Potatoes.

JAMES GIBBS & COMPANY have turned their attention specially to the manufacture of these Manures, which contain all the elements necessary to promote the growth of Potato and Turnip crops. The results have given universal satisfaction, and prove the Manures to be the cheapest yet sold.

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SUTTON'S PERMANENT PASTURE MIXTURES,

Carefully arranged for various descriptions of soils, to produce abundant crops of Hay and superior Pasturage.

BEST QUALITY MIXTURES (2 bush. Grass Seed and 12lb. Clover supplied per acre), 30s. to 32s. per acre.
GOOD QUALITY MIXTURES (a full seedling per acre), 22s. to 28s. per acre.

A CLOVER THAT SUCCEEDS ON CLOVER-SICK LANDS.

SUTTON'S
NEW
**GIANT HYBRID
COW CLOVER.**

This invaluable new variety is a hybrid between the Common Red Clover and Cow Grass. It is extraordinarily productive, and, under favourable circumstances, will produce three heavy crops for mowing or grazing in one year. It is very succulent, and succeeds well on soils that will not grow the Common Red Clover. Sow 16 pounds per acre.

Seed at present very scarce.

Price 2s. 6d per lb. Cheaper by the cwt.



SUTTON'S
NEW
**GIANT HYBRID
COW CLOVER.**

From Mr. I. Bates, Bailiff to
H. CROSSLEY, Esq., Ovenden.

December 21, 1871.

"The New Giant Hybrid Clover, sown with wheat, is one foot high, and we are cutting some, sown with Tares and Italian Rye Grass (a third crop), two feet high, and in flower. I have no doubt but that we could grow it a yard high. The weight is wonderfully good for cropping. We give it to horses, cattle, and pigs, and they all like it. I think it is worth three times as much as the old sort."

A NEW AND DISTINCT MANGEL.

SUTTON'S
NEW
**GOLDEN TANKARD
YELLOW FLESHED
MANGEL.**

The great peculiarity of this Mangel is the deep yellow colour of the flesh, whereas other varieties invariably cut white inside, whatever the outer colour may be. After careful comparative analysis, we find the proportions of saccharine matter and flesh-forming substances are much larger in this than in any other Mangel, and fully equal to Swedes or Turnips; hence its great value for feeding purposes.



SUTTON'S
NEW
**GOLDEN TANKARD
YELLOW FLESHED
MANGEL.**

We have grown this Mangel during the last two seasons against the best stocks of Globe and Intermediate Mangels, and find it produces much more weight per acre of roots, while, as before stated, the feeding properties are far superior. It has a very neat neck, small leaf stocks, and is remarkably free from rootlets. The stock is exclusively in our possession, and we can only supply it in limited quantities at 5s. per pound.

PRICED DESCRIPTIVE CATALOGUES of all other FARM SEEDS gratis and Post-free on application.

SUTTON AND SONS,
Seedsman to the Queen and H.R.H. the Prince of Wales, **READING.**

THE FARMER'S MAGAZINE.

A P R I L, 1 8 7 2.

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All Seeds Carriage Free.

CARTER'S PRIZE-MEDAL FARM SEEDS.

CARTER'S NEW ANNUAL BLUE CLOVER.

WE have much pleasure in introducing for public trial this remarkable and valuable novelty, which we believe is destined to supersede to a great extent both Tares and Trifolium. Its rapid growth will be best understood when we state that, during the past inclement season, seed sown in Yorkshire by T. C. Booth, Esq., of Warlaby, on May 21st, produced a crop over 3 feet long by August 2nd. Specimens of this astounding growth were exhibited by us at the last great Yorkshire Agricultural Show in York during the month of August of last year, together with an equally remarkable specimen contributed by W. S. Thompson, Esq., of Kirby Hall, York. This latter gentleman assures us that he has tried every kind of stock with it, and finds that all eat it readily. It must prove a great acquisition as an auxiliary to the Clover crop, as it can be sown in the spring to fill up where the previous season's sowing of Clover has missed, and will then produce an immense swarth, ready for cutting with the general crop.



Per ¼ lb. packet, 7s. 6d.
Post free.

C. WHITEHEAD, Esq., Farming House, Maidstone, says:—"I consider Messrs. Carter's New Annual Clover to be a valuable plant to supply the place of red or other Clover that has failed from the heaviness of the Corn crop with which it had been sown, from the drought of autumn, the severity of winter, or the many causes which now make this crop so precarious and uncertain. It may be used either as a substitute for the whole Clover crop, where it has been seen in March or April that it has entirely failed, or it may be sown with advantage upon the bare places when the Clover plant is patchy. It is of very rapid growth, and if sown late in March or early in April, will, with favourable weather, come to cut for hay in the second or third week in July. There is no doubt that it is a very valuable addition to the forage plants of this country.—August 14, 1871."

WE BELIEVE CARTER'S NEW BLUE CLOVER WILL PRODUCE A VALUABLE SECOND CROP OF HERBAGE FOR GRAZING.

The following reports reach us from Members of the Council of the Royal Agricultural Society of England, to whom we sent samples of our New Blue Clover in the spring of 1871 for trial:—

From MR. GEO. TAYLOR, *Baldiff to the Right Hon. Lord Eversley*:—"Home Farm, Heckfield, July 14, 1871.—I send you the result of the trial of Blue Clover seed you sent me in the spring. Sown April 30th, cut July 14th; height of stem, 4 feet 5 inches; weight of green food, 241 pounds; quantity of land, 240 square feet. The crop is certainly splendid for the short time in growing."

From T. C. BOOTH, Esq.:—"Warlaby, Aug. 17 1871.—The Blue Clover was sown on the 21st of May, and you will find some stalks in the bundle I have sent you 1 feet, 6 inches long."

From CHAS. BARNETT, Esq.:—"Stanton Park, Aug. 12, 1871.—The Blue Clover was sown March 22nd, in rows 9 inches apart, on fine stony soil in high condition and top-dressed with LAYNE'S manure. It grew very strong. I cut it July 25th, and gave some to horses, cattle, sheep and pigs, and all seemed to like it, particularly the horses."

From MR. E. A. GOWING, *Baldiff to the Right Hon. Lord Eversley*:—"The Farm, Tap'y, Aug. 12, 1871.—Your Blue Clover was sown the last week in April and by the 1st of August averaged about 3 feet 8 inches in height. My opinion is that it will grow an immense weight of fodder per acre."

"11, SALISBURY SQUARE, FLEET STREET, Jan. 27, 1872.

"1 Detailed composition of Carter's New Blue Clover.

"The following analysis represents the composition of a sample of Carter's Blue Clover in an air-dry condition, which was grown and sent to me by Mr. Druce, of Eynsham:—

"1. General composition of Carter's New Blue Clover.

Moisture	10.9
Soluble organic matter	24.09
Insoluble organic matter	53.81
Soluble mineral substances	9.33
Insoluble mineral substances	2.05
	100.00

Water	10.69
Oil and fatty matter	1.05
Soluble albuminous compounds	9.54
Insoluble nitrogenous compounds	5.01
Sugar, mucilage and similar soluble non-nitrogenous compounds	13.49
Digestible fibre	14.93
Woody fibre (cellulose)	33.90
Soluble saline matters	9.33
Insoluble mineral matters	2.05
Containing nitrogen 1.53.	
Containing nitrogen 0.80.	100.00

"In addition to these constituents the Blue Clover contains a volatile aromatic principle, which gives a peculiar and agreeable taste to the Clover, and which renders it valuable for mixing as cut hay with straw, chaff, or similar insipid feeding materials. The Blue Clover, I believe, will be found a good and useful article of food, and advantage may be taken of its aromatic taste to render straw and chaff more palatable and probably more digestible. Carter's New Blue Clover, both in a green state and as hay, I have no doubt will be much relished by sheep and cattle."

(Signed) AUGUSTUS VOLCKER."

We regret that the stock of this seed being very limited, we are unable to supply larger quantities than ¼ lb. packets for trial. Price 7s. 6d. per packet

Carter's Prize Medal Grass Seeds, see last page.

JAMES CARTER & CO.,

Seedsmen to the Queen and the Prince of Wales,

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Five per Cent Discount for Cash.

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Seedsman to



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CARTER'S IMPERIAL HARDY SWEDE.

1s. per lb. Awarded the following and many other Prizes *Chouper per cent.*
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Egham, Silver Cup. Bandon, First Prize. Mar Island, First Prize.
Moreton, First Prize. Llandale, Silver Cup. Temple Sowerby, First Prize.
Burton and Milnthorpe, First Prize. Croydon, First Prize.
Also, Five First and Five Second Prizes at Canadian Agricultural Meetings.

Seedsman to



The Prince of Wales.

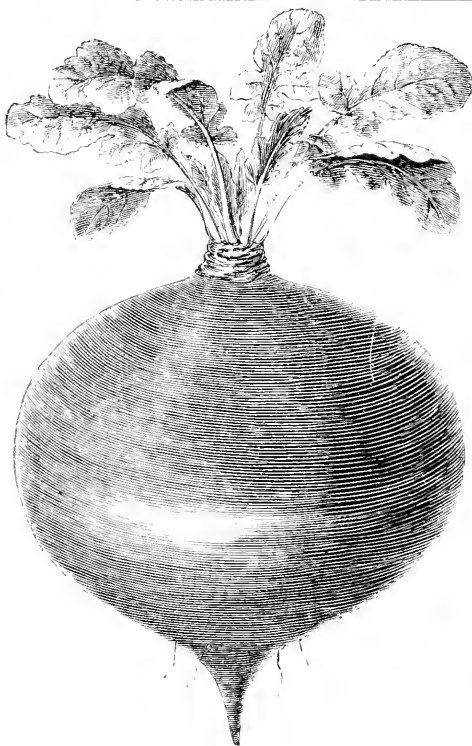
From

R. OSMEROD, Esq.

"*Aksythorait.*"

"Nov. 11, 1871

"I have much pleasure in hunting you a statement of the prizes taken by the roots from the Carter's Imperial Swede seed I purchased from you in September, 1870. First Prize (to £10 10s. cup) at the Limeslade Agricultural Society; First Prize at the Temple Sowerby Agricultural Society; First Prize and Highly Commended at the Burton and Milnthorpe Agricultural Society; and Second Prize at the Bentham Agricultural Society."



From

Mr. E. SARNEY.

"*Bobat Park Farm,*"

"Nov. 20, 1871.

"The Swede seed I received I am happy to inform you has produced an excellent crop, being large and very handsome, and I believe from their appearance they will withstand a great amount of frost without receiving damage. I hope to have some more of you another year."

From

EDWARD CRAIG, Esq.

"*The Gholl,*"

"Nov. 6, 1871.

"I have great pleasure in stating that the Turnips grown from your seed this season have obtained several first class prizes."

SWEDE. Choice Selected Stocks.

CARTER'S IMPERIAL HARDY (see <i>Illustration</i>), a handsome Swede; with small neck, grows to a great size, and is of fine quality.....	1 0	CARTER'S LONDON PURPLE-TOP	s. d.	1 0
		HALL'S WESTBURY, a good Swede....		1 0
		SKIRVING'S IMPROVED PURPLE-TOP, grows to a large size.....		0 10

TURNIP. Choice Selected Stocks.

CARTER'S CHAMPION GREEN TOP	s. d.	CARTER'S DEVONSHIRE GREY	s. d.
YELLOW HYBRID, the best	1 0	STONE	0 10
CARTER'S CHAMPION PURPLE-TOP		CARTER'S IMPROVED PURPLE-TOP	
YELLOW HYBRID, very choice	1 0	MAMMOTH	1 4
DRUMMOND'S EARLY FIELD YELLOW, a small, quick growing green top yellow	1 0	LINCOLNSHIRE RED GLOBE	0 10
ROBINSON'S GOLDEN BALL OR		HEANLEY'S LINCOLNSHIRE WHITE	
ORANGE JELLY, a very true stock	1 2	GLOBE	0 10
CARTER'S EARLY NIMBLE OR SIX WEEK	1 0	POMERANIAN WHITE GLOBE	1 0
		IMPERIAL GREEN GLOBE	0 10

Ordinary Stocks 9d. to 1s. 4d. per lb.

JAMES CARTER & CO.,

Seedsman to the Queen and the Prince of Wales,
237 & 238, HIGH HOLBORN, LONDON, W.C.

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Special Low Estimates for Large Quantities of Farm Seeds.

CARTER'S PRIZE MANGEL.

(As grown on the *Prince of Wales's Farm* for several seasons.)

Awarded the following amongst many other Prizes this season—

- Egham, The Silver Cup.
- Moreton, a Silver Cup and the First Prize.
- Chertsey, a Silver Cup.
- Bandon, Two First Prizes.
- Marshland, the First Prize.
- Spaunton Manor, The First Prize.

From J. FORTESCUE, Esq., *Bonaston Estate, God.*, Oct. 18, 1871:—"From your Mangel seeds I have had the most regular and heaviest crop I ever grew, and they are considered the heaviest crop in the neighbourhood."

From W. F. MORRISON, Esq., *The Blights, Oct. 19, 1871*:—"My Mangels from your seed are first rate."

From C. M. STARR, Esq., *Ballochmole, Oct. 3, 1871*:—"We were very pleased with the Mammoth Long Red Mangel seed I got from you."

From the Hon. A. I. MEVILE, *Bonaston Hall*:—"You will be glad to hear that my Mangel this year is the admiration of every one. It is so regular that I don't think I could find a tap of 3 feet in the piece. There are many complaints of Mangel rotting to seed this year, but I have not so many as 2000."

CARTER'S IMPROVED MAMMOTH PRIZE LONG RED MANGEL.

For several years past we have exhibited at the annual Smithfield Club Shows, some of the most magnificent specimens of Long Red Mangel ever seen, and notwithstanding the past unfavourable season for root crops, we this year excelled any previous exhibition with some Mammoth roots, weighing not only 50 pounds each—remarkable alike for size and quality. This popular variety may now be considered perfect, as, after some years of most careful selection, we have brought it to a standard of the highest excellence.

MANGEL WURZEL.

CHOICE SELECTED STOCKS.

	Per lb.	s. d.
CARTER'S IMPROVED MAMMOTH PRIZE LONG RED MANGEL, a variety growing to an immense size. (See Illustration).....	1	3
CARTER'S WARDEN PRIZE YELLOW MANGEL, small top, large root, a good keeper, of choice quality.....	1	3
CARTER'S CHAMPION NEW YELLOW INTERMEDIATE, fine top, large oval root; this Mangel, from its peculiar growth, may be "set out" closer than the Yellow Globe.....	1	0
CARTER'S ELVETHAM LONG YELLOW, a superior stock of Long Yellow.....	1	0
CARTER'S IMPROVED RED GLOBE, a very choice variety.....	1	0

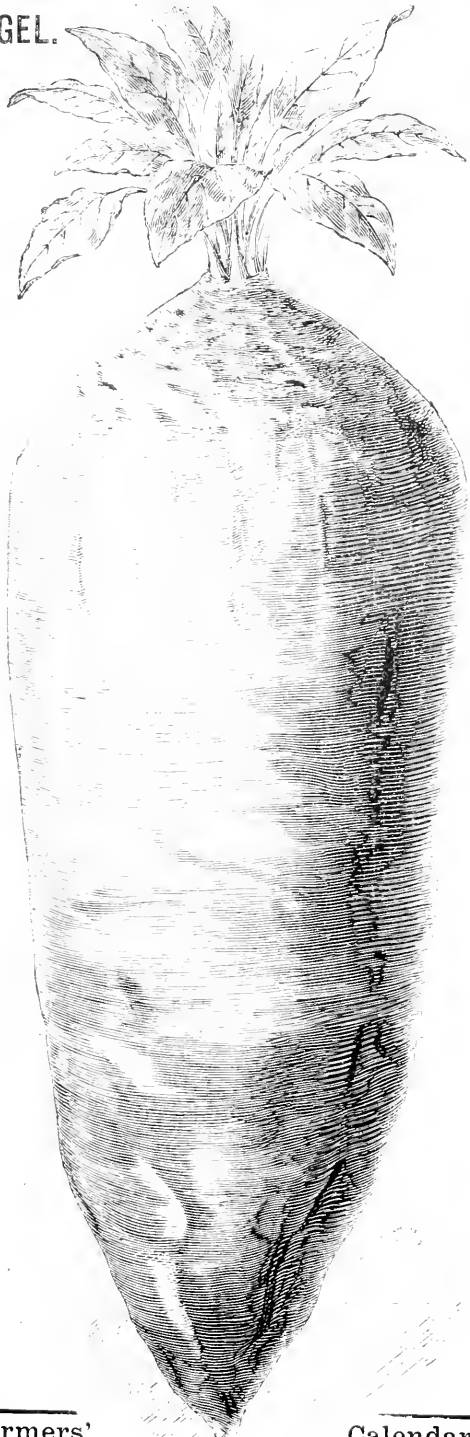
Much cheaper per acre.

Ordinary Stocks, 8d. to 1s. per lb.

CARROT.

Now 6 to 8 lbs. per acre.

	Per lb.	s. d.
LARGE WHITE BELGIAN.....	1	0
YELLOW BELGIAN.....	1	6
LARGE ORANGE BELGIAN, a heavier cropper than the preceding, and more nutritious.....	1	6
IMPROVED RED ALTRINGHAM, the best Red Carrot for good soils.....	1	6
RED INTERMEDIATE, the best Carrot for shallow soils.....	1	6
LARGE RED CATTLE.....	1	3



CARTER'S IMPROVED MAMMOTH PRIZE LONG RED MANGEL.

Special Low Estimates for Large Quantities of Farm Seeds.

ALL SEEDS CARRIAGE FREE.

All Seeds Carriage Free.

CARTER'S PRIZE-MEDAL GRASS SEEDS,

As Supplied to

THE QUEEN & THE PRINCE OF WALES.
The United States Government.
Her Majesty's Defences.
The War Department. The Crystal Palace.
Aldershot Camp. Lord's and The Oval.
Christchurch College, Oxford, &c.

EVIDENCE OF QUALITY.

From MESSRS G & J. PERRY, *Aldon Pigott*:—"The Permanent Grass Seeds we had from your firm in the spring are a thick regular plant, and appear to be a superior mixture."

From J. G. BRUCHAM, Esq., *H. Ashm. Lynn*:—"The Grass Seeds I had of you 2 years since for 3 years lay, are admirable, and continue to produce me wonderful crops, paying better than Corn."

From Colonel LEEFAN, R.E., *Aldershot Camp*:—"Colonel Laffan presents his compliments to Messrs. C & Co., and begs to inform them that all the Grass and Clover Seeds supplied by them to the War Office for use at Aldershot last year, have succeeded admirably. Last year a very good crop of excellent hay was produced on what had previously been a barren sand."

CARTER'S GRASS SEEDS FOR PERMANENT PASTURES.

CAREFULLY ARRANGED TO SUIT THE VARIOUS CONDITIONS OF SOILS.

	Per Acre.
FOR LIGHT SOILS ..	30s. to 32s.
FOR MEDIUM SOILS ..	Carriage free. 30s. to 32s.
FOR HEAVY SOILS ..	30s. to 32s.

Reduced rates for more than 10 acres.

Second Quality. 22s. to 28s. per acre.

CARTER'S RENOVATING MIXTURE FOR RENEWING AND IMPROVING OLD GRASS LANDS Per cwt 86s.; per lb. 10d.

This will wonderfully increase the Hay crop.

CARTER'S MIXED GRASSES AND CLOVERS FOR ALTERNATE HUSBANDRY.

To Lay Down Out, Two, Three, or Four Years in Grass.

Per acre—s. d.

- CLOVERS AND RYE GRASS, to lay one year. Comprising 14lbs. Clover and 1 peck Rye Grass 14 0
- CLOVERS AND MIXED GRASSES, to lay one year. Comprising Red Clover, White Clover, Trefoil, Cocksfoot, Perennial and Italian Rye Grass, &c. 15 0
- CLOVERS AND MIXED GRASSES, to lay two years. Comprising Red Clover, White Clover, Alsike Clover, Trefoil, Cocksfoot, Timothy, Italian and Perennial Rye Grass, &c. 18 6
- CLOVERS AND MIXED GRASSES, to lay three or four years. Comprising Red Clover, White Clover, Trefoil, Alsike Clover, Cow Grass, Sheep's Fescue, Cocksfoot, Meadow Fescue, Perennial and Italian Rye Grass, Meadow Foxtail, Timothy, Sweet Vernal, &c. 24 0
- MIXED CLOVER SEEDS ONLY, to lay one year 13s. to 14 6

We can supply Inferior Mixtures at Lower Rates.

Before Ordering Grass Seeds, send for CARTER'S ILLUSTRATED FARMERS' CALENDAR for 1872, containing an epitome of the various soils prevailing throughout the country, with reliable information as to How to Sow, What to Sow, and When to Sow.

Carter's New Blue Clover, see first page.



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A. Smith, Dotted Hoops



THE FARMER'S MAGAZINE.

APRIL, 1872.

PLATE I.

A SCOTCH POLLED HEIFER.

THE PROPERTY OF MR. JAMES BRUCE, OF FOCHABERS, ELGIN.

This heifer, bred by Mr. Paterson, of Mulben, Keith, Elgin, was 3 years 8½ months old, when exhibited at the Smithfield Club Show, in December last, where she was entered as fed on grass, tares, oilcake, bean-meal, turnips, and hay. She took here the first prize of £15 in her class, the silver cup of £40 as the best cow or heifer in any of the classes, and a Gold Medal for her breeder. At the Midland Counties Show, at Birmingham, in the week previous she took the first prize of £15 in her class, £20 as the best of all the Scotch beasts, the Gold Medal as the best cow or heifer, and the Innkeepers' Cup of 25 guineas as the best animal in the cattle classes. On seeing the polled heifer here we wrote of her as "a really sweet stylish cow, beginning with a bloodlike kindly head, backed with a long level frame, and as ripe as could be, without any signs of excess or disfigurement from over-feeding. So far as we can remember she is nearly as good as Mr. McCombie's cow,

which also won the Innkeepers' Plate, in 1861. The Burnsie Lassie still rather lacks scale, and this may stay her from reaching quite to the top in London." And she was beaten at Islington, by Mr. Stratton's white ox, although it is only fair to add she was manifestly amiss. Her registered weight on the Smithfield Club scale was 18 cwt. 2 qrs. 5 lbs.

Mr. Patterson, of Mulben, has bred polled cattle successfully for more than twenty-five years. He sold this heifer to Mr. Bruce, at the Forres fat stock show in December, 1870. She was then nothing more than an averagely good two-year-old polled heifer, but not having been forced in her early years, her progress under Mr. Bruce's liberal treatment was very remarkable. She stands recorded as Mina, by Arthur out of Tidy; and previous to the Birmingham meeting, Mina had taken three first and three second prizes at local shows in the North.

PLATE II.

"SAFT AND SLYLY."

The wind was scant, the sun was bright,

Nae cloud to cast a shadow;

The pebbles red show'd back the light,

Like flowrets in a meadow.

The wind was was scant, the east was fuic,

The flec fell SAFT AND SLYLY;

A curl—and checks at once the line—

'Tis he, but he comes shyly.

The Coquet Dale Fishing Song.

Who, that is an angler, does not love the quiet dreaming beauty of the bright golden days of May—the month *par excellence* of the angler? How joyous and blest to leave the world awhile behind, and in some secluded spot, where rushes the foaming or babbling brook, to unburden

your spirit, serew up your rod and your pluck, and mount the tempting lure, that, to be sure of success, must fall "saft and slyly"! Trout fishing, of all the other sports of the angle, is the most entieing. To the salmon-fisher angling for trout is what hunting the hare is to the fox-hunter. There may not be the same wild excitement after the fud; but there is all the quiet moderate amusement that can satisfy the true sportsman, and if a "south or souwester" raises a curl, there is every ehance of a full basket.

It is half the filling of your basket to know the lie of the trout in the different seasons. Here he is compelled, from the state of the wind and the brightness of the water,

to fish up-stream. No doubt but, with the wind and sun at your back, it is the best way; or with an unpleasant high bank on a dark day, if the wind blows up the river, wading up the river is equally good, and you will hook them within a half-dozen yards of you, as from the trout's position (head up stream) he cannot see you with the curl of the water. Mark how intent the angler is, fearful that, with his fine-drawn gut, a sharp edge of the

rock may cut off his hopes, and the trout with them. We cannot see the bright yellow spots of the trout as they show to the delighted fisherman; but we can fancy the glittering beauty spring, not into life, but rather the other way—to form a "dainty dish" to set before his conqueror that evening for supper. How firm he clutches the rod, just where the bend can have effect on the power of the fish in playing it!

FARMING IN IRELAND.

BY THE NORTHERN FARMER.

As previously noticed, furze is used extensively on this farm as food for live stock during nearly five months of the year, viz., November, December, January, February, and a considerable portion of March. It is given to horses, milch cows, and strong stores, without the slightest restriction as to quantity, old horses and cows long accustomed to it eating an enormous bulk during the hours of a winter's night. It is not considered sufficiently nutritious for calves and fattening stock, and is withheld accordingly, turnips, hay, and newly-threshed straw being looked upon as more economical in the end for animals of tender age, or those approaching maturity for the butcher.

It will at once be observed that such an inexpensively grown food as furze used continuously for such a lengthened period of the year must effect a vast saving on those products of the farm which can be grown only at heavy cost, and, in consequence, by the time they are saved and stored for use, have acquired a value which necessitates the most rigid economy in their use, and the most careful management in the purchase and selection of the stock destined to consume them, so as to make even a shade of profit. The day is past irretrievably when the ordinary tenant-farmer, living by the profit of his farm alone, could possibly hope to live and pay his way by stock-feeding, the sole profit arising therefrom being the manure made while the cattle occupy the stalls. The low value of corn, and the increasing difficulty of growing heavy crops, absolutely compels the farmer to look for his profit more from the cattle which he can rear and feed than from the corn which he grows—a system which just reverses that which formerly prevailed, corn, till within a comparatively recent date, taking first place. The aim of every man being, therefore, to keep stock, and, moreover, as great a number as his capital, or the extreme limit of his farm, will permit, it appears to me that such a plant as furze becomes eminently useful, and well worthy of cultivation, more particularly in those districts to which it is apparently indigenous, and where its extended growth can be undertaken with a reasonable prospect of success. Once set fairly agoing, the furze meadow costs nothing, no expense requiring to be gone to in top-dressing, cleansing from weeds, or bestowing on it the slightest cultural operation, nature herself doing all that is necessary. When the season comes round which sees the maturity of the crop, no expensive process of saving is required, no studying of the weather, nor anxiety as to its injurious effect on the crop in process of being cut. Whatever the prevailing feature of the weather, whether frost, snow, or rain, the work of cutting and carrying the daily supply goes on uninterruptedly, and without in the slightest degree injuriously affecting the quality of the fodder,

Although myself advocating the use of a crusher, after being cut into quarter-inch lengths by the ordinary chaffing machine, I yet found the stock on this farm eating it as it came from the latter machine with the greatest apparent relish, clearing out their troughs most unmistakably, without the slightest particle of waste. On examination, I could only account for the softness and appetizing appearance of the food so prepared by the quantity of grass growing with the furze, and, of course, cut and put through the machine with it, rendering it easier of mastication, more readily digested, and, one would naturally think, more nutritive. The furze meadow here is regularly gone over every season, cutting as close as can possibly be accomplished with the scythe, thus keeping the shoots or spray tender, and perfectly free from hard, woody branches. This mode of managing the furze-brake does not generally find countenance in the district, it being thought more profitable to cut only every second year, the quantity then obtainable being certainly immense, but losing in fineness of quality what may be gained in quantity, the latter being at best problematical when the loss of a year's crop is taken into consideration. To cows giving milk during the winter months, a feed twice a day is simply invaluable, as, however great the quantity of roots given, the furze without the aid of saltpetre or any other mineral acid will act as a corrective to the unpleasant taste they give to the butter, imparting to it as much sweetness and delicacy of flavour as can possibly be attained without abundance of grass. To wealthy families requiring a large supply of fresh butter during winter, an acre or two laid down permanently with gorse becomes eminently useful if for this purpose alone. Once fully tried it would never be given up, the quality of both cream and butter being so delicious in comparison with that with which saltpetre has been used, the effects of the latter, although to a considerable extent neutralizing the strong odour and taste of turnips, being but temporary, its admixture injuring its keeping qualities and making butter perfectly uneatable within forty-eight hours of the time it was taken out of the churn. With all the good qualities of furze, let no one however imagine that it may be depended on as a sole article of food during a long winter, as, although it is without controversy an excellent help, at once economical and plentiful, it becomes a truly miserable article of diet when not supplemented with a more nutritious and less-binding article of diet. With a moderate feed of turnips morning and evening, and furze at will (if largely grown), cattle will look like summer, preserving fine health and condition, their skins sleek and pliant, and the colours bright and distinct, always an unerring sign of a thrifty animal. A portion

of roots becomes absolutely necessary when the cattle are confined to the house, so that the healthy action of the stomach and bowels may be preserved, the soft watery turnip assisting digestion and preventing costiveness, which often proves fatal to cattle fed solely on furze. The *anti-labour* party growing few turnips, in many cases none, manage to bring through their cattle by understocking the pastures during summer, thus permitting the grass to remain in strong tufts for winter use; a few hours' run out every day throughout the season enabling them to pick up as much soft and easily-digested food as will prevent the morning and evening feed of furze from acting injuriously on the general health of the stock. Horses in like manner work well, and keep in fine health and condition, preserving a singularly soft and silky-looking skin when fed during winter with a fair quantity of oats and unlimited furze. When, however, a poor horse is kept on furze alone, or at least with the addition of a small feed of boiled turnips in the evening, his condition becomes altogether wretched, and his existence is but a continual round of misery. Horses thus fed, and noticeably in this condition, are but too frequently seen in the possession of small and struggling farmers, whose very necessities compel them to adopt a mode of feeding which their judgment cannot but condemn. To an agriculturist interested in the utilization of furze, a visit to the south-west of this county would afford an excellent opportunity of becoming acquainted with the subject in every particular, its growth as an economical food for stock being one of the most prominent industrial resources of an immense district. Here certainly is the natural home of the plant, soil and climate both being apparently suited to its successful and vigorous growth; every fence is topped with a hedge of furze, and every farm has a brake or meadow, varying in extent according to its acreage, supplying an immense amount of auxiliary food for stock during the winter months, and in summer a goodly quantity of fuel is obtained by permitting a portion of the meadow to remain uncut for a few seasons. Further, it is largely used as litter in the more inland districts, and on farms where little or no straw is grown. For this purpose it must be at least two years old, an old-established meadow giving an immense bulk of useful material for this purpose when cut at this age. It must, of necessity, be passed through the furze-cutter, but is usually left as long as the action of the machine will permit. The manure thus made on farms where there is no tillage land is used for top-dressing the pastures, a purpose for which it has become eminently fitted by the state of comminution to which it had previously been reduced. It occurs to me that labour-saving contrivances must have an immense sale, and implement manufacturers in consequence an excellent field for the disposal of their machines in Ireland. The expeditions performance of labour, and its heavy cost even under the most favourable conditions, appear to me to be one of the most popular and continuously recurring subjects of conversation amongst all classes of agriculturists, with those whose system of farming has reduced the number of hands to the smallest conceivable limit, as well as with the opposite section who declare it to be their firm conviction that the country is being ruined by the wholesale expatriation of that portion of its inhabitants whose wealth consists in the possession of strong bones and tough sinews. I was much struck with the remark of an extensive and intelligent farmer made while walking over a farm of 280 acres, which he held at some distance from that on which he lived, to the effect that the high price of labour absorbed much too large a share of the profits of farming at the present day. "This very farm on which we now stand, although all in grass, has hitherto kept two men in work, but indeed one

must do it in future, all I want done or will do is to have the cows driven out and in, and a gap made up in the fences when necessary."

As this was the only opportunity I had of seeing a farm conducted on the complete labour-saving system, I append a few notes descriptive of a mode of farm-management which is rapidly turning entire districts of country into dreary solitudes, which were at no remote date thickly populated, and in an agricultural point of view, hives of industry. Where the conditions are favourable there is no doubt but that such farming will pay, if not a very large, at least a safe and well secured profit on the capital invested, and this is all the farmer can afford to care for, leaving the question of depopulation to the political economist, a class in Ireland pretty largely represented. The farm alluded to is reared from the Earl of Bandon, a nobleman venerated by his tenantry for his kindness, amiability of manner, and untiring exertions for their material welfare and prosperity. It possesses as neat and compact a homestead as a farmer need desire, stables, cow-stalls, and cart-sheds, no requisite for a convenient and comfortable farmery being omitted. It embraces accommodation sufficient for all the working, breeding, and feeding animals required to stock the farms if worked on a four or five-course rotation, which a few years ago it was; now however the stables and feeding-stalls are deserted, the milking-sheds and calf-cribs alone being occupied, and that only for as short a period as can possibly be helped, the open field being the permanent abode of the live stock for the greater portion of the year. The stock consisted at the period of my visit of 30 milch cows, all crosses, the blood of what is known as the common Irish cow predominating. The cattle are thus much hardier, stand the winter exposure better, and give a larger return than better-bred and necessarily thinner-skinned animals would do under circumstances so discouraging, care, comfort, and attention being reduced to the lowest point. A standing stock of 50 ewes occupied the higher fields of the farm, also of a hardy sort, but, crossed with a good ram, were capable of making 24s. a head for every lamb reared, this amount having been realised for the past season, an exceptionally good one however for sheep and their produce. A number of young cattle reared on the farm and held over for the purpose of taking the place of aged or other out-going stock from the dairy, together with a number of strong store cattle, bought in to eat the surplus grass during the height of the growing season, completed the arrangements for stocking the farm in a way to enable the tenant to pay his landlord and secure a profitable return for himself, without the assistance or intervention of the hitherto all-important labourer. To effect this, however, a fourth party is introduced, who fulfils a highly important part in the successful carrying out of details and bringing them to a profitable issue. The entire year's produce of the milking cattle is let to a dairyman, who pays £8 10s. for each cow, milking and feeding, as well as every labour in connection with the cows, being done by him, free of all control by the tenant, becoming in fact for the twelve months engagement nominal owner. £8 10s. may seem to many practical men who are favourably situated but a small sum to be paid as the yearly return of a cow, but in reality it is not so; on the contrary, it is a large return when the conditions under which it must be extracted from the animal are taken into consideration. The land being grassy, there is naturally a fair flow of milk during the months of May, June, July, and August, and a portion of September, but when the nights get cold, and the stock of necessity remain out in the fields, the flow decreases at once, and late autumn, which is a highly important part of the year on a dairy farm, where early housing and

liberal feeding inside is adhered to, becomes nearly or altogether lost. By the terms of this arrangement, a usual one in the district, the dairyman becomes the owner of the calves as they are dropped, a select few being reared for the tenant, as already noticed, but purchased by him as weanlings at an understood price. A few of the calves are fed for veal, and another portion disposed of as stores, the land by agreement having to be cleared of all stock of this kind at a fixed date. In this way the bulk of the milk is consumed, a few pigs rendering the calves some help in this way—rather profitless help, however, of late, pork ruling so persistently low. The butter is disposed of at the weekly market in Bandon, the purchaser in this instance adding yet another link to the rather lengthy chain of persons who live and make money (often a goodly share of it) between the farmer and the export merchant. Let it be understood that the producer is only too glad of the accommodation which these country markets afford, and by no means grudges the buyers who attend, whatever profit they may make by the transaction. Singular to say that, although in the Great Cork Emporium for the purchase of butter from the producer the utmost care must be taken in all matters of detail—sweetness of quality, firmness of texture, exact proportions of salt, the providing of sound merchantable firkins, and, over and above all, the most rigid cleanliness—all these may be omitted in the country markets with the most absolute indifference. If the butter is moderately good in colour, firm to the touch, and free from strong odour or flavour, it is purchased at the top price of the day in every case, without salt, firkin or keg, a rising in cold water on leaving the churn being all that is done to it before being sent to market. The making up of these rolls of butter so purchased constitutes a distinct and recognised trade of itself, money making, or on the contrary, ruinous, according as the parties getting into it are skillful in the manipulation of the article or the contrary. To be successful considerable capital is required and extensive premises, so that a large business may be carried on, the small shade of profit that can be secured compelling the transactions to be large. Having through the kindness of a friend been shown through an establishment of this kind (a favour by no means readily accorded to outsiders) I had the pleasure of witnessing what was certainly a most interesting operation. It would, under the circumstances, have been extremely ill-bred to have questioned the workers as to the amount of washing and ingredients required to mix with the water so as to give the butter the necessary purification, after having been given to understand that the public were rigidly excluded, and that my own admittance was by special favour. Water of various degrees of temperature appeared to me to be the principal means relied on for cleansing it from impurity and equalising the texture of the butter. The rolls as brought in waggons from the market were first taken in charge by women who stood over large tubs of cold spring water, who took it up in easily managed pieces, rubbing it between the hands in exactly the manner of a woman washing clothes. Every particle having undergone a careful scrutiny it was passed on to another tub presided over in like manner, but apparently with water slightly warm; again it was passed on until it had gone through quite a number of hands, the article gradually assuming an evenness of colour and consistency until it came to the salter. The colouring (saffron) was carefully mixed with the salt in immense quantities ready for use; and when the women, whose duty it was to salt the butter, had the quantity required to fill a firkin, the salt was measured and thoroughly mixed. By this time the butter was in a semi-fluid state, and was poured into the firkins, instead of being thrown in bit by bit, as is done

by the ordinary dairymaid. The whole work of the establishment was performed by women, all being scrupulously clean in their persons and attire, and seemingly well able, through long practice, to put a large quantity of work through their hands. After standing in a cool cellar to harden for a few days, the butter is forwarded to the Exchange at Cork for disposal, and although sent in such immense quantity must yet be consigned by the inexorable and unchanging rule of the market to the same merchants, who receive it from the farmers, the export merchants purchasing from them on the day of its arrival, unless the receiving merchant is disposed to speculate by holding for a short time, a system, however, I was told which is more likely to turn out injurious than beneficial.

Pursuing inquiries with regard to the amounts received for each cow, by letting them to a dairyman, I found that it runs from £8 to £10, never exceeding the latter sum, unless on exceptionally good land, the average being about £9. Sometimes the milk is sold to the dairyman by the gallon, a safe plan for the latter if he succeeds in getting it low enough, but this mode appears to be falling into disuse, on account of its involving a certain amount of labour and supervision on the part of the owner and his family. Partly in produce and partly in cash is also a favourite mode of payment, as it to some little extent shares the risk, $1\frac{1}{2}$ cwt. butter, and £2 10s. in cash by way of payment for the milk being the current rate, on really good land and with good cattle, this as prices now run, being equal to 10 guineas for each cow. On those farms, from which turnip-growing to an appreciable extent as winter food has been excluded, the indoor food consists of chopped furze during the dead of winter, and in spring a morning and evening feed of hay, a portion of the farm being meadowed each year.

I have thus shown by several illustrations taken on the spot, and either actually shown or described by the farmers themselves, the various styles of farming practised in the south of Ireland, and described in the opening article under two heads, viz., the encouragement and concentration of labour, and on the other hand its almost complete extinction. The latter feeling undoubtedly actuates a very large section of Irish agriculturists, and through the agencies of certain favourable circumstances, amongst which are a mild and moist climate, and a kindly soil, mostly hired at what a Scotch or English farmer would count a low rent, they are enabled to carry out their favourite theory, it must certainly be allowed with a very considerable amount of success. To judge fairly of any mode of arable or pastoral husbandry, personal inspection is required, it being so difficult to judge the merits of different modes of management, while ignorant of the special advantages possessed by the locality in which they are being carried out. I could, for instance, conceive of an inhabitant of the north of Scotland, when he reads of cattle spending the greater part of the winter in the open field, imagining that but for the beatific law which confers a certain amount of pleasurable sensation on every animal while fulfilling the necessary functions of its animal economy the cattle might actually refuse to partake of the rather scanty and unnutritious food presented to them, preferring to die rather than live under such hard and unpleasant conditions. The benignity of the climate softens much of the hardship that otherwise would be unavoidable, and if the pastures are left rough from the summer season, with the addition of a little hay thrown on the grass after the turn of the year, cattle do well in the fields during winter in the south of Ireland, preserving excellent health, and coming out at the end of the spring, in fine fresh condition.

To the north and west of Bandon the two leading proprietors are the Duke of Devonshire, and the Earl of

Bandon, both excellent landlords, neither disposed to raise the rents which in numerous cases could be easily done, nor to remove any industrious well-meaning man from his holding, even should the pressure of circumstances cause him to be in arrear. The former is represented by an agent, whose powers are no less than viceregal in their amplitude; and who, a kind-hearted man himself, is all the more capable and desirous of carrying out the kindly intentions of his employer. The Bandon family who trace their descent in an unbroken line from the landing of William the Conqueror, have ever been distinguished for loyalty to the Crown, and earnest exertion in promoting the interests of Ireland generally, and this county in particular. Their seat, Castle Bernard, is beautifully situated on the banks of the lovely river Bandon, about a mile above the town, and is occupied by the family for the greater part of the year, thus constituting the Earl a residential landlord—a class whose value in a largely agricultural country like Ireland can scarcely be overrated. Passing through the town on a market day, the earl and various members of his family were pointed out to

me, mixing quite familiarly with the country people, who on that day crowded the streets in busy throngs, showing an example to many others of his rank well worthy of imitation. Himself a farmer on a large scale, with the management entrusted to an experienced and enthusiastic agriculturist of established reputation, he has the opportunity of benefiting his tenantry by showing them the working of new and useful implements, and by being able to show splendid crops of turnips and mangolds, for the growth of which the home farm of Castle Bernard is famous, they are actually forced into imitation.

With fish in countless myriads on her coasts, with mines, rich in copper and other valuable ores, with flag and slate quarries in abundance, all requiring only the application of capital and skill for their profitable development, one cannot but wonder at the wholesale expatriation of the working class from a country which possesses such means of employment. With such vast natural advantages, it becomes hard to see why the inhabitants of Ireland are not as rich, happy, comfortable, and contented, as any race of people on the face of the earth.

BOTLEY AND SOUTH HANTS FARMERS' CLUB.

THE PROGRESS OF AGRICULTURE.

At the March meeting, Mr. W. Warner, the President, in the chair,

Mr. TRANK said: I am sure I am very pleased indeed to come out of my latitude and attend here, in the hope that the few remarks I have to make will provoke a discussion from you. I was laughed at by a friend, who said "What a fool you must be to think about saying anything about the progress of agriculture since the formation of the Club in 1844. Why, you were only a child then, and what do you know about the progress of agriculture since then?" However, Mr. Warner, your president, has been kind enough to lend me the reports of the Club since its formation, and I have had great pleasure in reading them. I see there is hardly any subject treating on the practice of agriculture but what has been discussed by you, and it almost always resulted in a very good and able discussion. I must apologise for the shortness of my paper. It is not very long, and for the simple reason that I have had a great deal to attend to. I am very glad to find that Mr. Spooner, your secretary, has written a paper on the subject, and I have no doubt whatever his will be the most practical one of the day. I may say that there has been great and rapid progress in every branch of farming, by which the production of the soil has been largely increased, combined with the necessity on the part of the farmer to employ a much larger capital on his farm, which will, I think, be admitted by everyone; but that the farmer realises a larger percentage on this increased capital, I am not prepared to admit. I have not thought it worth while to quote to you a number of statistics—easily found by everybody in almanacs and blue books—to show you the increased amount of corn grown or imported, or the number of live stock now existing as compared with the number supposed to have existed some thirty years ago. I do not think these returns very reliable, and I do not think it will be controverted that the amount of produce realised by the handiwork of the farmer generally far exceeds what it did before the period to which I have alluded. The repeal of the Corn Laws followed soon after the formation of the Club, and, although I make no comment as to the policy or otherwise of that measure, there is, I think, hardly one amongst us who would wish for a re-imposition of any protective duty whatever, but we would rather ask that freedom to do as we will with every production on our farms should be accorded to us. I do think the repeal of the Corn Laws induced farmers, or rather obliged them, to turn their attention more to the growth of root-crops for the fattening, &c., of stock, thereby necessitating the use of artificial manures and feeding stuffs, and the employment of more capital

in the cultivation of their farms. We have now in full swing amongst us steam ploughs, and engines, reaping, mowing, and thrashing machines, and mechanical appliances for the performance of nearly every operation on the farm, produced by the intelligence and ability of so many firms of implement-manufacturers throughout the kingdom, so many of whom have realised large fortunes through the hands of the farmer by this branch of progress in agriculture. There is also the increased and increasing demand for prepared soil fertilisers, called artificial, and too often, I fear, not wrongly so named. The influence of railways on the progress of agriculture has, of course, been very great, but it has been reciprocal. The railways benefit by the transit of the various classes of farmers' goods, and the farmer benefits by the cheaper and more expeditious way in which he sends and receives his articles. I am sorry that we cannot congratulate ourselves on the part legislation has taken during the past twenty-five years for us. I do not think that we are at all better off. We have had no remission or amelioration of the malt duties, although so frequently pressed on the attention of our legislators. The game abuse in many districts of the kingdom is as rank as ever, thereby preventing thousands of acres of land from being enabled to produce their utmost in the shape of farm-produce. The Irremovable Poor Act, the Union Chargeability Act, and the Remissive Highway District Act have in some instances lessened the burdens on particular parishes, but the benefit to the farmer has on the whole, I think, not been very appreciable. The "Police Gamekeepers' Bill" has obliged the farmer to pay for the increased care taken for the preservation of the hares and rabbits which eat up his crops; and Mr. Lowe has managed so that we pay the tax in order that we may be the better enabled to scare the rooks from our corn, and that our shepherds may have the assistance of a sheep-dog in managing their flocks. We narrowly escaped paying the horse-tax when carting materials for the repair of the highways, and we this year only just escaped, paying horse-dealers' duty. The incidence of local taxation remains the same. The additions to that incidence increase. The county-rates, the rates for the police, the poor-rates, and other taxes have increased, and almost every burden that could be has been put upon us, but let us hope that the agitation now going on in the local Chambers of Agriculture may lead to its more just and equitable revision. The formation of Farmers' Clubs, and more recently of Chambers of Agriculture, have been the means of diffusing information, both important and necessary, to the farmer, and at the same time of bringing into more intimate contact owner and occupier; for we must

admit that the more we meet and talk over matters concerning our joint interests the greater advantage we obtain. As a part of this subject of progress I think it well to notice, and it may give rise to some little discussion, the tendency now of many farmers to grow, by the aid of nitrate of soda and similar manures, more frequent corn crops, thereby necessitating a diminution in the number of sheep kept on the farms. In this, and the adjoining county I know several large farms which do not now carry more than half the number of breeding ewes, which they did twenty years ago, or even later. If, with the present prices stock are now paying, this be politic, and if a similar practice prevails in other counties, can it at all be wondered at that the price of stock so much advances? I think that the practice above hinted at, together with the havoc caused in our flocks and herds by the dry summers of 1868 and 1870, has much to do with the present high price and general scarcity of lean stock. The question of wages and labour has been and is now becoming a large and important one to every farmer. I shall notice this presently, and shall now venture to say a few words on the present prospects, so far as I can see them, of the farmer. You will have seen that I have once or twice noticed the necessity, and I believe that necessity to be imperative, that the farmer should now have the command of a much larger capital than formerly, wherewith he may be enabled to avail himself of, in order to procure these improved and more costly appliances which he must have in order that he may be enabled to hold his own amongst his fellows in other callings of life. For this increased outlay there is now no better security, and the man who goes on now risks far more than his fellow did twenty-five years ago. By security, I do not mean fixity, or even security of tenure, but a perfectly well understood arrangement between owner and occupier, whereby the latter may know to a nicety how he would stand, what his loss and what his gain, in the event of any of the many unforeseen occurrences which often happen to terminate a tenancy. Whether this security is the better met by a long lease, or by compensations for unexhausted improvements, combined with a two years' notice to quit, is a moot question; but I hold a man to be nearly akin to mad who goes into a middling sized farm, unless exclusively a dairy farm, subject to a six months' notice to quit. In many of the rural districts there has been, more especially during the last two or three winters, a superabundance of labour. Pauperism has increased; the farmer has often had to pay rates when he could hardly afford to pay wages, and some men have been assisted to emigrate—and these things have happened from causes over which the farmer could not possibly have had control. What do we find at the present moment? A great and general demand for labour amongst nearly every branch of industry, and it is with the view of asking my brother farmers to take stock of their position with regard to this labour question that I have made these remarks. My advice to them is to be prepared with every available assistance in the way of machinery, and, now that our men are to be educated by Act of Parliament, we must so educate ourselves that we may be able, if possible, not to allow our labour to rise per acre. We must get as much done by piece-work as we can for then the best men will be the more easily found out; and may we express the hope that our landlords will continue to do, as many are now doing—take care that the labourers with families are as much better housed, and as near their work as possible, as the farmer will have to take care that he is better paid, and therefore fed. I think no good tenant would object to pay a fair increased amount of rent if he could have the necessary amount of cottages in his own hands for the labourers on his farm. There are at this moment many farms in the market. Some have been in it for some time, but applicants are scarce; and for what reason? Simply that the capital of the farmer has paid so low a rate of interest for the past few years that men with the necessary amount of capital are chary of risking it, and the more so because you so rarely get offered you fair play with your farms and security for the use of your brains. I take the farmer to be the great middle-man of rural social life. He finds the capital, by the use of which he pays his rent to the individual who enjoys the large rent-roll in luxury, by the use of which the village and small town shopkeeper get their income, and the labourer gets his wage. From the few remarks I have made it will, I think, be gathered that I look upon the position of the farmer now as one requiring watchfulness and great care; command of

larger capital, and greater intelligence in the application of that capital to his business; a knowledge not exactly of science, but of those practical points connected therewith, which will enable him so to apply the different manures to the various descriptions of soil he may have to deal with as to get the greatest possible benefit from the application. In fact, he must so farm as to endeavour to obtain the greatest possible results with the least possible loss. I will end with the remark of Camden: "That whatever temporary fame we may obtain by the splendor of our army, or the extent of our conquests, the basis of real national glory must ever be agriculture, commerce, and the arts of peace."

Mr. HOLDAWAY said he was much obliged, as he was sure all of them were, to Mr. Trask for bringing forward the subject that day. They might compare it almost to history—the rise of the Roman Empire, but not with its fall. When he looked back thirty-one years, since he first went into business, the implements of farming then made were nothing to be compared with those they used at the present time, and they went on improving every day. Mr. Trask had observed that they ought to carry on agriculture to the highest possible pitch with the least possible expense. However, he had not told them exactly how that was to be done, and he felt sure they would all agree with him the higher they farmed the greater their expenses would be. They had been assisted to a great extent with machinery, and they had also been aided with manures, which were not obtainable years ago. But when they were buying those they should know the men with whom they were buying out their money. Their expenses still increased, and they had a great deal to complain of in the shape of not being relieved of some taxes, but there was one thing in which they had been very fortunate—and that was the introduction of the Poor Law, which had resulted in benefit. He thought that the most beneficial change, next to the Post Office, we had now in working order. He believed what had been given them in the shape of amendment in the Poor Laws had been most beneficial to all classes.

Mr. TRASK: But the rates have got heavier.

Mr. HOLDAWAY: There has been an increase in the wealth and population.

Mr. TRASK: And we are not so well off with regard to rates as before.

Mr. HOLDAWAY: I pay less now than I did thirty years ago.

Mr. TRASK: And I pay more. There is the difference, you see.

Mr. GODRICH: Mr. Holdaway is speaking of the poor rates before the Poor Law Bill was passed. That makes all the difference.

Mr. HOLDAWAY concluded by saying that there was no doubt there had been a great and general advancement in agriculture, and it was their duty to advance it in every possible way.

Mr. JAMES WITHERS said that there had been a great improvement in agriculture no one could deny, and he fully coincided with what Mr. Trask had stated, but the question arose—Had this progress been of benefit to the tenant-farmer or the landlord? During the past twenty-five years rents had risen 25 per cent., and in some cases more than that. Then the taxes were somewhat higher, and then labour had also increased in price. Therefore, with these little extra outgoings, he did not think the farmer was in a much better position than he was twenty-five years ago. He must progress; he must get to the foremost rank, and in doing that he often got but very little profit. He did not approve of anybody remaining at a standstill. He wished them to bear in mind that he did not desire to throw any slur or blame upon the landlords, for undoubtedly they had the right to make the best arrangements they could so as to secure the largest return for their land. There was one matter which ought to be alluded to, and it was the breaking up of waste land. He contended that it should be broken up and made more productive than it was now. At the present time he saw that the amount of wheat imported into the United Kingdom from foreign parts cost no less than three and a-half millions of money. He believed the waste lands in England could be brought into cultivation with benefit, especially as there was a market for the consumption of all they could produce. They ought to make those waste lands produce all they required, and it was a disgrace that they did not. Mr. Mechi had made some remarks with regard to

the drainage of wet lands. That ought to be the first step in agriculture, and cultivation would be all in vain until that was done. Mr. Mechi said that to make England prosperous and happy, both pecuniarily and politically, there ought to be a liberal investment of capital which was now lying idle, in agricultural improvements, which would yield a far greater return than foreign loans. There were millions required, which would pay fifteen or sixteen per cent. He (Mr. Withers) should be pleased to have some of the money to be laid out in draining, and would be glad to pay six per cent. for it, which would be a very good return. They wanted more extensive drainage and cultivation, and any gentleman who laid out his money in draining and got six per cent. for it ought to be satisfied with that per centage. If the three and a-half millions which were now paid to the foreigner could be saved it would be a great boon to the country.

Mr. J. BLUNDELL said he had only to cast his eyes round Botley, and he saw since 1844 what a wonderful improvement there had been in the cultivation of land in that neighbourhood and also in the cattle. The improvement of the latter seemed to him to be the most important point which naturally suggested itself upon that occasion, considering the kind of stock they had in 1844, the period when the Club was commenced. Not only had there been a great improvement in the class of stock—whether it was sheep, horses, cattle, or swine—as they had witnessed at their cattle shows, but a more beneficial improvement had been brought about, he did not mean to say entirely through the influence of the Botley and South Hants Farmers' Club, for there had been other things at work as well, but he would say this—that that Club had not only had its weight and influence in that neighbourhood in the improvement of cattle, but throughout the kingdom. They must bear in mind that their cattle had not been under a bushel. Their reports had circulated throughout the country, and in Scotland as well. He might mention that a gentleman—a commercial traveller—who had dined with them at their root show, told them that the next he heard of them was a gentleman reading the report of the proceeding of the Club in the next partition to which he was in a coffee-house in London. This went to show them that if a number of men collected together for the purpose of communicating their ideas and comparing notes upon agriculture their doings were not hidden, but they circulated throughout the country, and they could not take up one single subject connected with agriculture without its being a benefit to some one. He need not speak of the extensive improvement that had taken place in the cattle; and when he compared their first show with that which was to be held that day fortnight, he found there was a great and a beneficial difference. And this had been very much brought about by the improvement in the emulation which existed between the members to wear the blue ribbon at the cattle shows, and they all knew that this was a thing of which a man was proud. It was worthy of them all to strive to endeavour to obtain it; and he felt proud as one of the first who formed the Club to find that its influence was not only acknowledged, but that it had greatly enhanced agriculture in general, and he hoped that in future others who would take their place would stand up and acknowledge the importance of the Club, which would be a reward or a recompense for any exertion given, or for any merit they might have gained in belonging to the Club. But there had been a great improvement in the growth of cereals as well as in cattle. Not only had there been good crops grown in certain seasons, but the general product of the country and the neighbourhood had increased, for he might tell them that where one load of wheat was grown before ten were grown now. That was owing to the great progress they had made through the discussion of various subjects. As Mr. Trask had said, there was scarcely a question connected with agriculture which had not passed in review before the Club, and which had been spoken to by practical and scientific men as well. A mere reference to their reports would show them there had been an improvement in their cereals as well as cattle. Then there was the growth of roots, a matter of special importance, for he very much doubted whether there was any society in the kingdom which had carried out with that energy and forethought the reward for the growth of roots as they had at Botley. Not only was there an improvement in the gardens, but they did not confine themselves to that, as the improvement had spread to the competition in the open field for miles around. This was not only a practical

question for old farmers, but it was a field in which much could be taught, and was a capital opportunity for young men to learn. He was one of those who had endeavoured to emulate and excel in this matter. He could assure them there was much to be learnt, for it was a great privilege to be a judge at their root shows, as a man had the opportunity of going round and seeing what was going on around him, and therefore he hoped gentlemen would not be backward in coming forward to act as judges on a future occasion. He believed he would be a wise man who adopted this mode of learning. He was sure, when a person was a judge, there was always something to learn which must be of advantage to himself. The rotation of crops had had much to do with successful farming, and this was a matter which had commanded their deep attention. He recollected that at the formation of the Club the four-course rotation was the only known rotation by which they could afford to pay their rent, but the discussions that had taken place at that club had given rise to a better system, and at present they did not find there were many people who kept to the four-course system unless they were tied to it, or they had light land and farmed at a moderate rent; but in order to pay the high and increased rents which were now asked for, they must adopt a system which would enable them to pay that high rent. No man in that neighbourhood could pay a high rent if he was tied to the four-course system. The tenor of the discussions that had taken place in the Club showed that the four-course system must be improved upon as much as possible, more especially as they were now supplied with artificial manures, for which they had to pay. The introduction of these manures and cake for feeding purposes was an improvement, and he should like to know what had been the consumption of these two articles since the formation of the Club. He was sure it would astonish them all. Now artificial manures could be carted very cheaply to the outlying portions of the farm, which were previously reached with great expense, and this added much to their success. There was hardly a manufacturer of it when the Club was started. They saw there had been very large and successful establishments since then. The manufacturers had made fortunes by it out of the money the farmers had had to pay for it. At the same time each had their opportunity of doing this. The manufacturers in many parts had supplied them with a really good article when they were prepared to pay for it. They were much indebted to these men, as they issued papers showing the manures which were best calculated for various crops which were grown on certain soils, and they were very thankful to them for it. He was quite sure, when they came to look at another branch of the subject, they would tell how much was due to them for having taken it up, and he would next take the value of the land to rent, as farmers were now obliged to pay a higher rent than they were in 1844. Rents had risen very much since then, in many instances as much as ten shillings per acre. What had been the cause of this? He could not believe that it arose from a greater competition by capitalists only, but it was from the competition on the part of intelligent men, who were backed up by the advantages which had been given them by the introduction of machinery, and other things. Look what a position steam cultivation had reached, and at what power they had for the cultivation of the land in 1844. A question which was only in embryo then had now grown into one of the greatest magnitude. The exertions of the Club and others in the country had done much in this direction, and as they went on there would be a still greater improvement in agriculture. There was a great advantage in steam power, not only in the cultivation of the land, but from the way in which it was brought to bear on other matters connected with agriculture. Much had been done in the way of the preparation of food for cattle. It had saved the expense of labour, and a very good job, too, for they must recollect that the system of education now adopted would tend to elevate the labouring class. It was a very good thing to see steam power as it was, as they were not obliged to employ ignorant men, as formerly. The matter of steam cultivation and power was one which required their attention, and he had no doubt that it would be hereafter made a special subject, and one which would make the influence of the Club generally felt. He believed that the Club had gone very far to raise the standard of farming throughout the country. As far as the landlords were concerned, he thought they ought to be exceedingly pleased with the information afforded by the Botley and South Hants Far-

mers' Club, which had had the effect of causing the land to be occupied more beneficially to all concerned. About the time of the establishment of the Club it was the boast of a man that his right arm was his strength for the cultivation of the land, but he would ask whether his right arm without capital would stand him in any stead at that day? If he fancied he could swim without it he (Mr. Blundell) thought different, because it required a large investment of capital in the age in which we now lived. He meant to say that it was a disgrace to this country—and he was now showing them how necessary it was to look to the relative products of the kingdom—that they should be obliged to fall back upon such a large importation of corn and cattle. They imposed something like one-third of their breadstuffs, and $8\frac{1}{2}$ or 9 per cent. of their live cattle. This showed they had plenty for their own land to bear; and it reminded him of the remark the Attorney-General made the other day, when he said that the claimant went to Wapping "to see how the land did lay." He would say, "And how does the land lay?" Let them look at about half the farms throughout the country. If the landlords wished for the farmers to succeed in this country they must free the farms from the trammels of bygone days. They wanted to show them that the four-course system and every other old conditions that were put in leases, which were musty and rusty, and made in lawyers' offices, were not what was required at that day. They wanted to make them understand that they wished to be able to go further—they wanted them to deal fairly with them, and with an open hand, and join with them in propelling forward the vehicle of agriculture, and help them to produce sufficient to feed the population of their own country.

The CHAIRMAN said he was very sorry to say their secretary, Mr. Spooner, was not with them that day, but he had sent him a letter, in which he said: "It was in 1844 that the memorable meeting of the Royal Agricultural Society took place at Southampton, and our club was one of the healthy progeny which sprang into existence as the offspring of this successful meeting. For although in point of number, either of stock or of implements, the meeting in question has been since far surpassed by others, yet there was an amount of novelty and vigour of intellect developed then that we look in vain for since. Verily, there were giants amongst agriculturists in those days! It is true that the richness of the ideas that appeared then to crop up so rapidly was due in a measure to the fact that for many years previously these ideas had been pent up, there having been since the time of Arthur Young and the County Reports no legitimate means of affording them an outlet. At that time there was little science connected with agriculture; good practice there might be, and many useful experiments were instituted, some of which were successful, and others were failures. Well, for want of the explanation which science afterwards afforded, and also of the means for disseminating facts, the success was in great measure hidden, and the failures were repeated, with great loss, over and over again. The earlier attempts of chemists only served to mystify matters, and point to opposite conclusions from what practice proved to be correct. It will be seen by our annual Prefaces, which precede the publication of our Reports, and for which I am for the last twenty-five years chiefly responsible, that we have noticed and sympathised with every important movement affecting the agricultural world, that we have discussed the principal questions of the day, and that, though comparatively remote and unimportant, our pulse has beat in unison with the heart of British agriculture, the most honourable and the most important of all our industrial pursuits. We have witnessed the introduction of most important improvements in mechanics and in scientific practice, by which produce has been increased and labour has been saved, and although the wise men who were the first to adopt these improvements derived some advantage from their use, yet such has been the fierce tide of competition that the use of improved machinery soon became a necessity rather than an advantage, and the public came in for the lion's share of the gain. There is much truth in the observation of an old farmer at an agricultural show, 'No sooner does a man lay out his money in a new implement than some *confounded fool* comes along and invents something a good deal better.' The gratitude of the public are greatly due to agriculturists for their exertions and improvements, for the public for the most part have had the benefit. There is one point on which, I think,

we may fairly claim credit, that whilst our discussions have been open and untrammelled, and distinguished at times by free expression and very contradictory opinions, yet personalities have always been avoided, and a difference of opinion has never led to a breach of friendship."

Mr. SUTTON said Mr. Trask had spoken of the farmer running the gauntlet of the taxes, and that he had to help the implement manufacturer to make his fortune as well, but he might remind him that the latter had to sink much capital and employ an immense amount of labour to bring this about. [Mr. TRASK: I said so.] He had also received large orders from abroad, as he believed 75 per cent. of the implements went abroad. He also found that Mr. Trask advised that the best men should be looked out, and that they should introduce piece-work. This was just what the manufacturers had done for years. They paid their men by piece-work, and they thus had the means of ascertaining who were the best men by the work they did.

Mr. J. D. BARFORD would tell them that there had not been any improvement in the breed of animals in proportion to the progress that had been made in agriculture. This was a matter which demanded their serious attention, and he might especially allude to the farm horses, where there ought to be a more judicious selection of the sires and dams for breeding purposes. He could see that there had been no improvement in the breed of cart horses when compared with the advancement they had made in other directions in agriculture, as this was remarkable, considering the fabulous prices these horses had fetched of late. It was a rule with farmers not to rise a mare for breeding purposes until she was nearly or quite worn out, while no attention was paid to the quality of the sire, as the cheapest was generally selected. If they attempted to breed from an animal it should be a good one, as it would not cost them a fraction more. He saw this year twenty guineas given for a sucker which had just left its dam, and he could say that if they only got fifteen guineas from one it would pay them better than growing corn at its present price. Nothing would pay better than making a proper selection for the breeding of stock, and he could not impress upon them too seriously the importance of this matter.

Mr. JOHN GATER remarked that his acquaintance with the Botley and South Hants Farmers' Club now extended to nearly twenty years, and he really did not think he was getting so old. He was very glad to hear from the members, and especially from the fathers of the Club, that the advancement of agriculture had been, at any rate, if not from the cause and effect of the Club, coincident with it. He believed that they had had better stock in the farm since its establishment, and the improvement in the breeding of animals showed what an advancement had taken place. Whether they looked at the way in which agricultural operations were carried on, the breeding or rearing of animals, and all other things, it was evident from what they had heard that day that an improvement had taken place. Among the many improvements there was that of the land. He recollected the time—ten years since—when draining was scarcely known at all. What an improvement has now taken place with regard to it? He recollected some twenty years ago that an enterprising man in that neighbourhood had the temerity to put in a drain five feet deep, and he was thoroughly laughed at by his neighbours, but now they drained as deep as possible, for they found out that the water went to the bottom, and then rose into the drain. He did not agree with Mr. Withers that 6 per cent. would be a good investment for draining, for it must be evident that a drain would not last for ever, and it would require to be renewed. Then again, another and cheaper mode might be introduced hereafter, so that the money invested would be sunk. He could see that great improvements had been made in farm buildings. The old ones of thirty years ago would be of no use now. They had no bullock stalls, houses for the implements, and other things which they had now, and which were of great help to the farmer in his business. Then there had been a great improvement in the cultivation of the land. The work was done better, and more economically. Artificial manures had been of much benefit, and men by study had found out what was the best for the different kinds of crops, which had not only proved of advantage to himself but the country at large. With regard to the labourers he thought the piece-work system would be very advantageous. He could tell them that he had really good men working by the side of those who were

worth next to nothing, and if the system Mr. Trask had alluded to was adopted it would result in much benefit.

Mr. JAMES WITNERS contended that if a drain was properly laid down it would last a very long time, and if it became choked with sand, chalk, or other things, and useless, that was the fault of the tenant. When a drain was once put in the tenant had to do the repairs, the landlord finding the material, and therefore he thought six per cent. was a good investment.

Mr. TRASK, who had to leave to catch the train, here made some observations in reply, and said he could not speak much of the neighbourhood. He had been into some counties where the taking in of waste lands had done much more harm to farms than good, as more labour was required for the arable portion, and the expense consequently greater. He quite agreed with Mr. Blundell, that they should get as much out of the land as they could; but they would have the stuff sent over from every quarter of the world, so long as they could grow it and import it cheaper than they could sell it. Then, again, he thought it was the duty of the farmer to look a little after himself as well as the vast consuming public. He was very glad the implement manufacturers had got on so well, and was certainly surprised to hear that three-fourths of the steam-engines went abroad.

Mr. SURTON: I said of the steam machinery. I do not pledge myself to 75 per cent., but I believe it is so.

Mr. TRASK replied that it very much surprised him. He believed that in some parts vast sums of money had been certainly sunk in draining.

Mr. Trask then left the room, a vote of thanks to him for his paper being proposed by the Chairman, seconded by Mr. Blundell, and carried unanimously.

The CHAIRMAN said that he had seen a vast improvement in agriculture during the last thirty years. That improvement was due, perhaps, in some measure to the landlords but he believed it was mainly owing to the capital and skill of the tenants. He believed the latter, as a body, had done everything in their power for agriculture. They had endeavoured to make two blades of grass grow where only one grew before, and he therefore thought they required some little consideration and assistance from the landlords in their endeavour to go on with the improvements. He would observe that the improvements in agriculture had not kept pace with those in manufactures, for while the former had improved 25 per cent. the latter had made progress at the rate of 75 per cent. It was only the other day he was reading a discussion which took place at the Surveyor's Institute in London, in which it was stated by one that Lord Derby and the Earl of Leicester said that the land did not produce half what it ought to, which was a very serious thing. It was quite clear that the area of land was daily diminishing, as it was being occupied by buildings and railways. These remarks from the Earl of Derby, a far seeing man, and the Earl of Leicester, a great agriculturist, must apply to both owners and occupiers of land. They were all concerned in it, for it was their duty to produce as much from the land as possible, and to breed as much cattle as possible,

and they must call on the landlords of the kingdom to assist them in producing food for the people of the country. They should consider, in some measure, the position of a large number of the tenants, and it was their duty to make the most of the land entrusted to them. He did consider there was a great claim on the landlords of the country, and that they should develop the resources of the estate they had come to. They should breed more cattle and grow more corn than they did at present, for they knew that at present all the world was open to them, but the time might come when there would be war, and there would be a difficulty in getting corn into this country. Therefore he thought it the duty of tenants not only to do more than some of them had, but the landlords should do more than they had hitherto for the production of food for the people of this country. Mr. Gater assumed that if a landlord was called upon to drain the land he did not think he would be satisfied with 6 per cent.

Mr. GATER replied that he did not think 6 per cent. would be sufficient for the outlay.

The CHAIRMAN did not see how that could be, for they often found now that a man was ready to purchase his neighbour's field if he wanted it, which would only give him 2½ per cent., while if the money was laid out in draining it would be a much better investment.

Mr. THOMAS WARNER thought 6 per cent. was as good an investment as a landlord could make. If the drains were put in a proper depth and were well looked after they would last for many years, and it was the fault of the tenant if they became choked. He believed it would be a long time before the present system of drainage was changed. He thought if a farm was divided into three parts it would be much better and more productive, for at the present time there was not sufficient capital to bring out all the resources of a farm.

Mr. BLUNDELL pointed out that the average duration of life was rather short, and there were not many who held estates for more than twenty-one years. He thought that 6 per cent. was a good investment, especially when they were told that the money could be borrowed at 4 per cent.

Mr. JAMES WITNERS thought that tiles would last quite as long as a brick if they were properly put into the ground.

Mr. JOHN GATER said that his observations were to the effect that he thought it doubtful if 6 per cent. was a sufficient interest for many to go into draining. It was all uncertain how long the drain would last, and then a method might be found hereafter by which it might be done much cheaper than it was now.

Mr. THOMAS WARNER expressed an opinion that the skilled labourer ought to be better paid than the unskilled one, and that more attention should be given to this matter.

The following resolution was then submitted by the CHAIRMAN, and agreed to: "That in the opinion of this meeting the progress of agriculture since the formation of this club has been very great and important, of great advantage to the landlord and tenant, and to the community at large."

Mr. HOLDAWAY proposed a vote of thanks to the Chairman.

THE IMPEDIMENTS TO AGRICULTURE.

At a meeting of the Hampshire Chamber of Agriculture, at Fordingbridge, Mr. John Ridley, of Damerham, introduced the subject of "The Impediments to the Progress of Agriculture—Physical, Social, and Financial." Mr. W. W. B. Beach, M.P., President of the Chamber, was in the chair.

Mr. RIDLEY said: On the first part of the subject, more especially, is it difficult to make any observation worth having, for we all know perfectly well that land, being so cumbersome a commodity, its very size must imply toil and laboriousness of working, and when to this you add the further difficulty caused by climate, almost every act of husbandry being dependent more or less upon the weather, it is at once manifest that the physical impediments of farming are of a special nature, totally unlike those to which other employments are subject. It is further removed from man's control, and to overcome those impediments requires patience combined with well-timed action, ever bearing in mind not to thwart but to assist Nature. One

difficulty before us is the unsatisfactory condition which farm workmen are said to be in. Although in my humble opinion this unsatisfactory condition has been much exaggerated, it is no doubt desirable to improve their position as to work and pay, for cases are constantly occurring where men prefer slovenly work and a small low pay (though really high) to a better style of work and proportionate high pay. As a help to this desired improvement it has been proposed by some that the men should in addition to their earnings each have a small farm of three or four acres, if possible, of pasture land. On this subject I wish to speak with deference, because the plan is advocated by some for whom we all have a sincere respect, and with whom we agree in the desire to further the well-being of our fellow men, though differing in the mode of obtaining that object. This plan, however, could only be carried out in certain localities where the nature of the land was favourable, and if introduced on a large scale it would cause a financial diffi-

culty in providing capital for these small farms, as, on a moderate calculation, if a farm of 400 acres requires eight pounds an acre capital, a farm of four acres would want twelve; and this extra money would have to come from other sources than that now employed in farming. Among the social impediments to agriculture may be reckoned these: Some landed estates being used more or less for other purposes, such as sporting, farming being a secondary consideration, or social position and political influence being most thought of; on other estates the cultivators are so restricted by agreements (the reverse of liberal) that they amount to a preventive of good husbandry. Another hindrance is, many properties are unduly hampered by settlements which cause the owner in possession to be merely an annuitant or life holder, and as such having but little inducement to improve the property. When an estate is hampered by debt as well as settlement, the evil is increased. The financial impediments to progress are many. To begin with the returns or profits of farming are perhaps the most various, and uncertain of any regular occupation. There are many farms carried on for years without any profit, such as in the case of well-to-do families who don't like to give up a place which may have been for generations occupied or owned by their ancestors. Other people continue to occupy land for the sake of country sporting life, and from various causes a considerable proportion of land is farmed for other purposes than simply to make an income, and thus the acreage is less for those whose object it is to get a living by farming. One great requisite is, how to apply more capital to the land with judicious security for reaping the benefit of the same; and with all our skill, capital, and industry, failure often follows from causes over which we have no control. In no other occupation does a man put himself and his property into the power of another so much as a tenant farmer who is without a long lease or covenants for unexhausted improvements, and this has a tendency to drive active-minded men into mercantile or professional pursuits. Perhaps it will not be out of place to mention here the opinion of a man who both owning and farming is well qualified to give a good one, though it may seem startling to us. He said the day was coming, or would come, when in England no farming would pay, but such high farming requiring so large a capital that no one would expend it on another's land, except on leases answering in some respects to building leases common in towns, and for a long term of years. To obviate the difficulty caused by the want of security of capital applied to land, much may be done by farmers themselves, for a large proportion of owners are or would be willing to come to terms with tenants desirous of improving their farms; a liberal spirit on the one side would, it is to be hoped, be met with the like on the other side. But on estates where the owner does not or cannot make the outlay, the law should protect the tenant who invests his own money in improvement by giving him a legal claim upon the estate for unexhausted improvements, so that when he leaves or dies he or his family receive what justly belongs to them. In Ireland there is that legal Tenant-Right, and it is equally required in all the British Islands. Foremost in improvements are draining and farm buildings, and although this subject may belong more properly to a Farmers' Club, perhaps I may be allowed to express an opinion on the want of farm buildings, draining not being so much required in this county as in many others. In I conclusion moved the following resolution, viz.: "That the Hampshire Chamber consider that the progress of agriculture is impeded by the want of compensation for unexhausted improvements, and by the present system of settlement of landed estates, which tends to limit the application of capital to the permanent improvement of such property."

Mr. JEANS (Breamore) seconded the resolution.

Mr. REEVES (King's Somborne) was of opinion that the reason why much of the land did not pay for cultivation was that of late years increased burdens had been thrown upon it. Farmers had now to pay what their forefathers never dreamt of. He might instance the matter of education. He didn't know how the shoe fitted them, but it was likely to pinch him and his neighbours pretty severely during the next few months. What was once a crack school in the county was more than three miles away, and the Act would compel them to build another. It would cost them £600, although there were only 200 inhabitants. As regarded farm buildings he thought the landlords ought to do the whole of the building, inasmuch as the tenants might have to give up their holdings in the

course of a few years. There was the question of turnpike roads. Those roads would shortly be thrown upon their lands. Twenty miles of road in the neighbourhood of Stockbridge would be thrown upon the ratepayers next November. His opinion had always been that those who use the roads ought to pay for maintaining them. Then came the Game Laws, about which, perhaps, the less said the better. He thought the tenants themselves were a great deal to blame in the matter. In taking a farm, they ought to be careful not to sign away their own birthright. Farmers and landlords should have equal rights, and farmers should have an eye to the point before signing any agreement. Next came the question of the agricultural labourer. He would do anything he could to improve the position of the labourer, but he did not believe that giving him more than a quarter of an acre of land, would have that effect. The labourers were pretty much the farmers' masters already; and if they had more land, the result would probably be that they would want "a day or two for themselves" when their services were most required either in the hay or corn field. Compensation should also be paid for unexhausted improvements, and a clause should be inserted in every lease to that effect.

The CHAIRMAN said he could not, however, coincide in the remark that the subject was more fitted for discussion by a Farmers' Club than by a Chamber of Agriculture. A Chamber of Agriculture consisted of persons who were all interested in the science of agriculture, and he was of opinion that the subjects which Mr. Ridley had brought forward were, in every respect, deserving of their consideration. The first subject which had been alluded to was the great call there was in the present day for an expensive system of machinery in the cultivation of the land. It no doubt enabled the soil to be cultivated in a more economical and more efficient manner than formerly, but still a considerable amount of capital was required in order to provide it. The position of the farm labourer, to which Mr. Ridley had also alluded, was one that deserved the serious consideration of everyone interested in the well-being of society. He was glad to hear the testimony of one who was so conversant with the subject as Mr. Ridley that the condition of the labourer had improved of late years; but he could not concur in the suggestion which had been thrown out in some places that the labourer should be allowed to become the holder of a "small farm." An allotment of twenty or forty rods, according to circumstances, was, no doubt, of the greatest benefit to him in providing vegetables for his family; but if he were to become the occupier of a certain number of acres, it would render him dependent, to a great extent, upon the adjacent farmers, because it would be difficult for him, with any advantage to himself, to cultivate the whole of his land by spade labour. He knew districts in which small holdings had succeeded to a certain extent; but the reason was that the holdings had not been in the nature of small farms, but something between allotments and small farms; and the occupiers had had opportunities, by working in harvest and other times when labour was in request, of realising a certain amount of money, which, if they had been entirely restricted to their own land, they would have had no means of acquiring. With regard to the question of leases, he could only say that he himself had always been in favour of a good, liberal lease for a considerable term of years—that was when the tenant wished it. But in such a case he thought the landlord had a right to expect the tenant to bring a considerable amount of capital to bear upon the land. On the other hand the landlord was bound to give every facility to the tenant in the matter of cultivation. He should not bind the tenant down with restrictions that would fetter his discretion in the application of his capital. The only restriction should be this—that in the latter part of his occupation, say the last two years, the tenant should adhere to certain rules of cultivation. He quite agreed in what had been said with regard to the pressure of local rates. It was a subject to which public attention was being more and more directed; and he was glad to see that there was a strong feeling in favour of preventing additional burdens being placed upon those rates. This year, they were told, the expenses of militia stores would be thrown upon the country at large, and not defrayed out of the county rates. That, he hoped, would be the prelude to other equitable charges, which were imperial charges, being thrown upon the country also. Mr. Reeves had referred to the burden likely to be cast on some parishes by the Education Act; but he

begged to remind the Chamber that where it might unfortunately become necessary to establish a School Board power would exist for the borrowing of money, the repayment of which might be thrown over a series of years. The burden would not, therefore, be so oppressive as it would be if the whole amount had to be paid at once. He concurred in what Mr. Reeves had said with regard to the turnpikes, but he feared from the tendency of recent legislation that the principle he had advocated of requiring those persons who used the roads to keep them in repair was not likely to be adhered to. As regarded the Game-laws, the great difficulty arose from over-preservation, but he thought the hardship would become

gradually less. If legislation did not do so, public opinion would step in and prevent a recurrence of such serious damage and annoyance as had hitherto existed. Referring to the question of compensation for unexhausted improvements, it was only fair that a tenant who put a certain amount of capital into the soil, and had not had time to reap the full benefit of it, should be remunerated for what he left behind. There might in some cases be a difficulty in ascertaining the exact amount, but by adopting the custom of the country some general and fair understanding might be arrived at.

The resolution was carried unanimously, and also a vote of thanks to Mr. Ridgely.

TENANT RIGHT IN RABBITS.

(Before the MASTER of the ROLLS.)

HENSWORTH v. MANN.

This important suit, which has been pending for a considerable time, came before the Master of the Rolls, on a motion for a decree. Sir R. Baggallay, Q.C. and Mr. Bedwell appeared for the plaintiff, and Mr. Fry, Q.C., and Mr. Cozens-Hardy for the defendants.

Sir R. BAGGALLAY, in opening the case, said that the suit had reference to a covenant contained in a lease, granted on the 16th of November, 1869, by the receiver of an estate, the Rev. Augustus Barker Hensworth, in the course of administration by the Court. [It was afterwards explained that the lease practically dated from 1862, the formal execution of it having been delayed.] The lease contained a covenant on the part of the defendants, Mr. Fairman Joseph Mann and Mr. John Eagling Mann, that they "shall not kill or destroy, but shall do their utmost to preserve, the game and fish on the lands and premises hereby demised, and shall not shoot or sport over the said hereby demised premises, or set traps or snares on the banks of the said coverts above ground on any part of the said lands and premises hereby demised, except for taking and killing rabbits." The farm for which the lease containing that covenant was granted was known as "Church Farm." A previous lease was granted in 1860 to a gentleman named Daniell of a private residence and the park immediately surrounding it, together with the right of shooting over the whole of the estates, including that portion occupied by the defendants. A gentleman named Budd was the present assignee of that lease, and with the permission of the Court of Chancery the bill was filed in the name of the receiver, Mr. Hensworth, who had been indemnified by Mr. Budd, for the purpose of trying the question whether there had been a breach of covenant. The property was situated in a good sporting county, Norfolk. The estate formed part of the property of Mr. John Barker, deceased, whose widow was the tenant for life, certain other persons being entitled to remainder, and consisted of a private residence in Norfolk, called Shropham Hall, a park of 52 acres, and 1,600 acres of farm land, there being other land in the adjoining county of Suffolk which increased the total acreage to 3,278 acres. The rental of the defendants' farm was £605 per annum. There was, as he had intimated, an earlier lease to Edward Daniell, and under it the lessee was to have the right of shooting and sporting over the property, with the sole reservation that the other tenants on the estate might kill and destroy the rabbits on the lands in their occupation, provided they did no injury to the game and did not set traps or snares on the banks of the coverts above ground. That lease was purchased by, and transferred to, Mr. Thomas William Budd in 1864, and he had ever since been the occupying tenant of Shropham Hall and park, and the possessor of the shooting rights. These sporting rights comprised, amongst others, the right of sporting over a covert called "The Grove," containing about 40 acres "which covert," said the Bill, "is bounded on the west and on a portion of its northern side by lands in the occupation of one Robert Land, a tenant of the said estate under a lease granted by the receiver for the time being, and on the south and the remainder of the north sides thereof it is bounded by lands in the occupation of the defend-

ants, and of their said lease of the 16th November, 1869, and on the east it is bounded by the high road from Shropham to Larlingford; and the sporting rights over all the said lands, and over the said covert called "The Grove," belong to the said Thomas William Budd, under the said lease to the said Edward Daniell." The learned counsel here explained, with the aid of a model, the position of the farm of the defendants relatively to The Grove, and stated that out of 1,760 yards of boundary 836 bounded the defendants' land, and 220 abutted on the high road; 704 yards skirting the farm of Mr. Land.

The MASTER of the ROLLS inquired to whom the shooting in the coope belonged.

Sir R. BAGGALLAY said Mr. Budd had the hall, the park, and the shooting over the whole estate, including the farms of Mr. Mann and Mr. Land. In November, 1869, the defendants, the Bill said, without the plaintiff's knowledge or consent, erected parallel to the whole of the north side of the covert where it abutted on their farm, what they described as their "trapping bank," consisting of an earthen bank surmounted by close wire fencing, the whole being of the height of 5 feet or thereabouts, of which the earthen bank formed 3 feet and the wire netting 2 feet. The defendants thus made it impossible for any game to pass from the covert to the farm except by climbing or scrambling up the bank. In 1870 they completed another similar "trapping bank," which had been already commenced in 1869 parallel to the south side of the said covert so far as it abutted on the defendants' land; and between the two they got the game covert pretty well shut out from their farm. They constructed the second bank rather differently from the first. As the Bill said, "they fortified this southern bank on the inner side with briars and furze, laid horizontally and closely-packed together, and projecting on the inner-side of the bank, and overhanging it to an extent of eight or nine inches, and having the effect of forming a projecting coping of the said bank and acting like *cheveue de frise*." "Both the said banks," it was added, "were pierced by the defendants with holes in which they set traps for rabbits, and the distance of the northern bank from the regular boundary of 'The Grove' is about five or six feet, and that of the southern bank is between fifteen and twenty feet. Subsequently, in October, 1870, the defendants caused the whole of that bank also to be surmounted with wire fencing, and raised the height of the southern trapping-bank to the same as that of the northern bank, that is to say, nearly five feet, and the diameter of the mesh of the said wire netting is about an inch and a half." The learned counsel then explained, by means of the model before mentioned, the nature of the embankment in question, adding that any game except game on the wing was quite imprisoned by it.

In reply to the MASTER of the ROLLS,

Sir R. BAGGALLAY said that at the side of that part of the coope which adjoined Mr. Land's farm there was no embankment; but there could be no doubt that if the defendants succeeded Mr. Land would follow their example, as he had made an affidavit on their behalf. The result of the erection of this bank was that Mr. Budd was prevented from keeping up a sufficient quantity of game, the game being deprived of that

power of running on the adjoining land which was essential to the nourishing and bringing up of birds that were unable to fly; and Mr. Budd alleged that the said trapping banks were constructed for the express purpose of preventing all game that was unable to fly from passing from one side to the other of the said banks, except by going round the banks, or passing through the holes in which the rabbit-traps were set, and that these holes were, until the early part of the spring of this year, regularly opened at night by the defendants, and that the result of setting such traps was that the hares belonging to the said Thomas William Budd were continually being caught in such traps, and that he has a record of eight hares which have been so destroyed, three of which were sent up to him by the defendant Fairman Joseph Mann, with a message that they had been caught in his "trapping banks," and in consequence he, the said Thomas William Budd, caused a watch to be set at night, and, as the said holes were opened, caused them to be stopped by his gamekeepers, with a view to preventing his hares getting into the defendant's traps, and at length, in the early part of the spring of this year, the defendants ceased from setting such traps, but they still insist upon their right to set the same, and generally to use the said banks as trapping banks."

Mr. FRY said the plaintiff had admitted that three of the hares were sent to him by the defendant.

Sir R. BAGGALLAY: Yes, when the plaintiff had caught some hares he sent some up to the hall. Mr. Budd further said that "the banks were especially injurious at that period of the year when the young partridges and pheasants were unable to fly, and had the double effect of imprisoning in the covert any young birds which might have been hatched within it, and also preventing such young birds as might be outside the covert from finding shelter in it; and that while the parent birds were able to fly over the fence the young birds were prevented from following, and were liable to be deserted, and this was peculiarly serious in the case of pheasants, the pheasant being a bad mother and easily induced to desert her young." In support of this the plaintiff stated that upwards of 20 young pheasants were found dead by his servants on the defendants' land in the course of the summer of 1870, the effect of erecting the said southern trapping bank having been to make a narrow driftway running on the defendants' land all along and outside the southern boundary of the covert. The 20 young pheasants were found dead in that driftway, and Mr. Budd "attributes their destruction to the circumstance that in the summer of 1870 the defendants had a field laid down in grass at the south-west corner of the said covert, and drove sheep along such driftway to such field, and that the sheep drove the young pheasants before them, and that their attempts to climb the said trapping bank failed in consequence of the projection of the said furze, and that they were then trampled to death." The Bill went on to say—

The said driftway has not been used for driving sheep this year, and the said Thomas William Budd states that he has no record of any young birds having been killed this spring by the above means; but should the defendants again use the driftway for this purpose, the like results will follow, and they claim and have the right so to use such driftway at any time. The said Thomas William Budd also states that of the said two trapping banks that on the southern side is most injurious, inasmuch as that side is the sunny side of the covert, and the game prefer that side in consequence. The said Thomas William Budd also states that the boundary of the said covert called "The Grove" is altogether about 1,760 yards, and of this about 220 yards run along the said road from Shropham to Larlingford, 836 yards run along the defendants' land, and the remaining 704 yards run along the said farm of the said Robert Land, the tenant abovementioned. And the said wire netting and banks put up by the defendants run parallel to the whole of the 836 yards of boundary where the said covert adjoins the defendants' land, and the result is that an undue proportion of game coming from the said covert is driven on to the land of the said Robert Land, inasmuch as the ingress and egress to his land is free from any such obstruction as that erected by the defendants, and he has repeatedly complained to the said Thomas William Budd in respect of this circumstance, and it is thus that the defendants' banks are detrimental to the other covenants on the estate. Such game as does not find its way out of the land of the said Robert Land is driven to find its way out of the covert at the east end, which abuts on the high road abovementioned; but there it is met by high wire fencing placed at the top of the eastern bank that bounds the road, and erected by the defendants, who are tenants under their

aforesaid lease of the land which lies on the side of the road immediately opposite to the eastern end of the covert.

The MASTER of the ROLLS: Is the fence on the east or on the west side of the road?

Sir R. BAGGALLAY: On the east.

Mr. FRY: Do you ask for any order as to that?

Sir R. BAGGALLAY: I ask for general directions to restrain you from a breach of the covenant.

The MASTER of the ROLLS: Why did you not bring an action? It might then have appeared what the damage was.

Sir R. BAGGALLAY: The Receiver was the lessor.

The MASTER of the ROLLS: You might have indemnified him.

Mr. FRY: The bill in this case is filed in the Receiver's name.

The MASTER of the ROLLS: Personally of course he has nothing to do with it.

Sir R. BAGGALLAY: Our object is to prevent a continued breach of the covenant.

The MASTER of the ROLLS: But there is the question of the damage actually done.

Sir R. BAGGALLAY: We don't want our right to be measured by so many pounds of damage; we want the defendants to be restrained from doing what they undertook not to do. Money would not be a compensation.

The MASTER of the ROLLS: I want to know whether you have really sustained an injury.

Sir R. BAGGALLAY: There is the injury to the enjoyment of the estate.

The MASTER of the ROLLS: But have you sustained an injury?

Mr. FRY: They have killed more pheasants than they ever did before.

Sir R. BAGGALLAY: That is the old story that when you have blocked up a man's window he gets more light.

The MASTER of the ROLLS: Suppose the defendants erected these banks for the protection of their crops. Are they not as much entitled to protect them as you are entitled to the shooting?

Sir R. BAGGALLAY: We are hardly here to consider the question whether the Game-laws are good.

The MASTER of the ROLLS: But I put that as a mere question of legal right.

Sir R. BAGGALLAY: They have entered into a contract not to do a particular act of which we complain.

The MASTER of the ROLLS: The Receiver has given them power to grow crops on their land, and they are entitled to have fair protection for those crops.

Sir R. BAGGALLAY: Of course the question might have been raised in another form if the defendants had thought fit to build a brick wall so as to prevent the possibility of any game ever coming on his land; but they took the farm subject to the exercise by the lessor of the right of sporting over it.

The MASTER of the ROLLS: The defendants were to have a right to destroy rabbits.

Sir R. BAGGALLAY: But the question is whether they have done a fit mode of destroying rabbits. The covenant says that while they are to be at liberty to "kill and take rabbits on the said farm," they are to do no injury to the game on the said lands or the adjoining lands.

The MASTER of the ROLLS: That must mean other than rabbits, that is pheasants, hares, and partridges.

Sir R. BAGGALLAY: It is essential to the feeding of pheasants that they should have a right of ingress and egress as regards that portion of that estate. No doubt a covenant of this kind is a fetter, an injury, and a detriment to the farm; but the defendants took the farm with their eyes open.

The MASTER of the ROLLS: The only question is how far they have injured the pheasants, hares, and partridges. The rabbits they were entitled to kill.

Sir R. BAGGALLAY then read a statement in the Bill to the effect that at the beginning of this year the plaintiff, Mr. Lensworth, at the request of Mr. Budd, visited the bank, and satisfied himself that he had reasonable ground for complaint; and also that Mr. F. J. Mann had complained that Mr. Budd did not cause the rabbits in the neighbourhood of "The Grove" to be kept down sufficiently; and that he (Mr. Budd) had proposed that the defendant should stop the rabbits by the erection of the ordinary low wire fencing, but the defendant said he preferred to erect the trapping-bank.

The MASTER of the ROLLS: Everybody knows that ordinary low wire fencing will not stop rabbits, unless it put a foot in the ground, which makes it more expensive than a bank.

Sir R. BAGGALLAY: On the 11th of March, 1871, the plaintiff wrote to Mr. F. J. Mann, in consequence of such visit, as follows:

Bacon, 11th March, 1871.

DEAR SIR,—I regret to say that I do not think you have been acting in accordance with your lease by imprisoning the game in the wood, so that your farm is not open to its ingress and egress, and is therefore useless to us for sporting rights. I hope, therefore, you will take my advice by throwing down the bank in order to avoid the cost of trying the question. Your lease appears to me, in conjunction with Mr. Budd's lease, to afford ample protection to you without taking the matter in your own hands in this unusual way.

Believe me, yours faithfully,

Mr. F. MANN.

A. B. HEMSWORTH.

The defendant declined to accede to the suggestion contained in that letter, and therefore this suit was commenced, Mr. Budd indemnifying Mr. Hemsforth. The plaintiff said:

Mr. Budd had informed him that he had discovered that the defendants have, in that one of them has recently on repeated occasions, one of which was the 24th of June, 1871, caused a shepherd, employed by them on their farm, to pass over a portion of one of their fields of corn immediately adjoining the said covert called "The Grove," on the southern side thereof, two or three times in the course of the day with his dog, and thereby deliberately to disturb the young game in the immediate neighbourhood, and upon the gamekeeper of the said Thomas William Budd remonstrating with the said shepherd, and pointing out to him that his dog was actually running the young partridges, the said shepherd stated that he acted by the orders of the said Fairman Joseph Mann, who had given him directions to hunt the said field every day, and two or three times in every day, and the said shepherd added that he did not hunt the field so often as he ought to do, according to his master's orders; and the said Thomas William Budd also states that on some occasions recently the same shepherd has been found walking, by defendant's order, over the same field, carrying a gun, with the express object of disturbing the game in such field.

The defendant, John Eagling Mann, the Bill said, pretended that he had not taken any part in the acts complained of, but that he was liable as part owner of the farm and responsible for the acts of Fairman Joseph Mann. With regard to the holes, the defendants contended that they had a right under the lease to erect and maintain the said bank as a bank for "trapping rabbits," and in his correspondence with the plaintiff and with Mr. Budd, Mr. Fairman Joseph Mann called it his "trapping bank," and said it was essential to its success as such that it should be surrounded with wire fencing to prevent the rabbits from passing over the bank, and forcing them to take to the holes left for their ingress and egress, and in which the traps were placed. In paragraph 28 of the Bill the plaintiff said:

The defendants sometimes pretend that the said Thomas William Budd has kept up an amount of rabbits and other game on their farm of such an amount as to be destructive to the crops of the defendants beyond what was justified by the terms of the said sporting lease. But the plaintiff charges that even if such allegations were true, it in no way justifies the acts of the defendants, and the said Thomas William Budd states that the allegation is wholly without any foundation, and in proof of this he states that on the farm of the defendants he, the said Thomas William Budd, was only able to kill nine brace of partridges during last season and four hares, but found no rabbits at all, while on two other farms adjoining, the one tenanted by one Mr. Barker, and the other tenanted by the said Robert Lamb, and together making about double the acreage of the defendants' farm, he shot in the same season 155 brace of partridges and upwards of 100 hares, and the said Thomas William Budd states that the defendants' farm affords him the worst shooting on the said estate.

The MASTER of the ROLLS observed that it was not stated there how often Mr. Budd shot on the defendants' farm, and that he might have done so only one day. He should like to know what was the character of the crops, and whether there was more or less stubble than usual.

Sir R. BAGGALLAY had no doubt there was the usual proportion of arable. The prayer of the plaintiff was as follows:

1. That it may be declared that the aforesaid acts of the Defendants amount to a breach by them of such of the covenants contained in their said lease as refer to the sporting rights over the said farm and to the killing of rabbits thereon,

2. That the Defendants may be ordered to alter the construction of the said trapping banks, running parallel to the said covert, called "The Grove," and the wire netting surmounting the same, in such manner as that the same shall not prevent the free ingress and egress of game to and from the said covert called "The Grove," and shall not be an obstruction to the said Thomas William Budd in the enjoyment of his sporting rights.

3. That the Defendants may be restrained from killing or taking rabbits on the lands demised to them, and from adopting any method of killing or taking rabbits on their said land so as to do injury to the game on the lands so demised to them, or to the game on the adjoining lands.

4. That the Defendants, their agents and servants, may be restrained from hunting the fields surrounding the said covert or doing any other act with the object of willfully disturbing the game on the lands demised to them, the said Defendants, and from injuriously interfering with the proper preservation of the game on the lands demised to them, and generally from doing any acts having for their object the willful disturbance of the game on the farm held by them, or the obstruction of the enjoyment by the said Thomas William Budd of his sporting rights over the said farm.

5. That the Plaintiff may have such further or other relief as the nature of the case may require.

The answers which the defendants had put in almost admitted what was charged against them in the bill. Mr. Fairman Joseph Mann had been in the actual occupation of the farm ever since 1862, the other defendant having joined in the lease by way of surety. The defendants said:

In the summer and autumn of 1868 the number of rabbits in The Grove was so great that the defendant Fairman Joseph Mann made repeated complaints, both verbally and by letter, to the said Thomas William Budd, and also to the plaintiff, but no good result followed from the complaints. In the following year serious damage was again done to the crops, and fresh complaints were made; and the plaintiff, at the instance of the defendant Fairman Joseph Mann tried to persuade the said Thomas William Budd to keep down the rabbits, but without success. On the 5th of December, 1869, the defendant Fairman Joseph Mann wrote and sent to the said Thomas William Budd a letter from which the following is an extract: "I have promised Mr. Hemsforth to wait a little time and see if the rabbits and hares are killed; if not, I must, in self-defence, employ men to kill them at night, and put up banks and wire-fencing round this portion of The Grove. I need scarcely add how sorry I should be to cause you annoyance in any way, and I still hope you may consider it wise not to compel me to adopt such means. You cannot blame me for protecting my own property from such vermin as rabbits and hares."

On the 11th December, 1869, the defendant Fairman Joseph Mann wrote and sent to the plaintiff a letter which, omitting the formal parts, was as follows:

I yesterday went over my wheat field "Stockstone," near The Grove. I was surprised and frightened to find so much injury done within the last few days by the rabbits and hares, so much so that I really dare not wait a day longer, so have commenced making a bank for the purpose of putting on wire-fencing. I find more than an acre of wheat has been eaten off in a few days. This wire fence will be an expensive undertaking, but I think you will allow me for the outlay. I feel you cannot refuse this under the circumstances I have explained. I think you will approve the steps I have taken. Nothing but prompt measures will save my wheat.

In answer to the above letter, the plaintiff, on the 15th of December, 1869, wrote and sent to the defendant Fairman Joseph Mann a letter containing the following passages:

I cannot allow you for any of the expenses of protecting yourself against the rabbits by banks and wire-netting; this you must do at your own cost.....Could you not surround "The Grove" with netting like that which is used in covert shooting, and so catch a sufficient number of rabbits to pay the expenses?

"Under the circumstances aforesaid," said the defendants, "we admit that the defendant Fairman Joseph Mann in December, 1869, with the full knowledge and consent of the plaintiff, began and soon completed the erection, on the land demised to us, parallel to the whole of the north side of the said covert, where it abuts upon the lands in our occupation, of a bank which we sometimes call a "trapping bank," and consisting of an earthen bank surmounted by wire-fencing, the whole being of the height of five feet, or thereabouts, of which the earthen bank forms three feet and the wire-netting two feet. Such bank is erected on the land included in our lease. It was erected solely for the purpose of protecting the crops from

destruction by the rabbits, and it succeeded so well that the defendant Fairman Joseph Mann became desirous of extending it to the other sides of the covert joining his land, and of obtaining permission to use for that purpose the banks of the covert which are not included in the lease of the farm.

The learned counsel then read part of a correspondence between the defendant Fairman Joseph Mann and the plaintiff, in the course of which the plaintiff said, "As to the rabbits I think you must protect yourself," and said that the defendants contended that the banks were, under the circumstances described, erected with the full knowledge and sanction of the plaintiff. They likewise alleged that Mr. Budd "never complained to them, and but for the statements in the bill they could not say whether he had ever complained to the plaintiff that the trapping-banks seriously obstructed him in the enjoyment of his sporting rights, and destroyed hares and young pheasants, and to the best of their belief there was no ground whatever for such complaints; that the bank did keep, and was intended to keep, the rabbits to a great extent from coming on to the farm, inasmuch as rabbits did not willingly go far from their holes, but it did not keep out hares, which went a great distance for food; and as to pheasants, they had been informed, and believed, that more pheasants were shot in the covert last season, when both banks were erected, than had ever been shot before since Mr. Budd had had the shooting." The banks certainly kept the animals away from that particular property.

The MASTER of the ROLLS said though what was done might be an injury to the neighbouring farms, it did not follow that it destroyed the hares.

Sir R. BAGGALLAY said the hares, not being able to get into the field to protect which the bank was erected, were driven in another direction, and it was impossible to say that that was not a breach of the covenant. No doubt hares did a great deal of mischief, but that was not the question.

The MASTER of the ROLLS, referring to a plan before him, observed that the hares had only to go about 100 yards round to get upon the defendants' field.

Sir R. BAGGALLAY said the defendants declared that in what they had done they had no thought of winged game, which they said did no damage to farmers; that Mr. Budd caused a watch to be set at night, and instructed his keepers to watch the holes in the banks, which they were advised was an act of trespass, and wholly unjustifiable; and that in November 1870, William Lines, one of Mr. Budd's keepers, was convicted by the magistrates at Harling of malicious injury to the bank. The defendants added, "With a view to remove every ground of complaint, we ceased in the early part of the spring of this year, and long before the filing of the bill, to set traps in the holes under the banks. We have no present intention of setting them again, but we submit and insist that we have the right, under our lease, to trap rabbits in the holes whenever we think fit so to do." If the principle for which the defendants contended were established they had a right to make an impervious wall on their side of the Grove, the other tenants might do the same, and the covert would no longer be a covert in the ordinary sense of the word. He contended that there was nothing in the answers of the defendants to shake the case of the plaintiff. The defendants had no right to drive back the game by employing, as they did, the shepherd with a dog; while the use of a gun was clearly likely to disturb the game, particularly when the young birds were hatching.

The MASTER of the ROLLS said he thought that would be injurious.

Sir R. BAGGALLAY said he must also ask his lordship to declare that the putting up of a fence which prevented ingress and egress was a breach of the covenant.

The MASTER of the ROLLS asked the learned counsel what precise injunction he desired?

Sir R. BAGGALLAY said he asked that the defendants might be restrained from adopting any method of stopping the ingress and egress of the game.

The MASTER of the ROLLS: I think you are entitled to ask that they may be restrained from hunting the ground. I do not think they ought to be allowed at the latter end of the month of June to send a shepherd's dog into a field where the birds are perhaps hatching their young.

Sir R. BAGGALLAY said he also asked that the defendants might be restrained from hunting the field surrounding the covert,

The MASTER of the ROLLS: I certainly think sending a shepherd through the field with a dog in the month of June is not justifiable.

Sir R. BAGGALLAY: It shows the animus.

The MASTER of the ROLLS: I am not sure of that. I think the animus of the defendants is the protection of their own crops.

Mr. FRY: We should have been ready to cease from doing what has just been mentioned if we had been asked to do so.

Mr. BEDWELL, who followed on the same side, referred to a statement of Mr. Mibill, who was sent by the Receiver to ascertain the state of the Grove as regarded rabbits, to the effect that in a whole day he could only kill four old rabbits.

Mr. FRY, Q.C., then addressed the court on behalf of the defendants. He submitted that both in point of law and in point of fact the plaintiff had failed to make out his case. The erection of the banks commenced in November, 1869, and Burton, Mr. Budd's head gamekeeper, stated in his affidavit that there had been no ground game on the defendants' farm, which comprised nearly a third part of the estate, for the last 4 years, and that it had been rendered absolutely valueless for sporting purposes. That affidavit, being filed in March, 1872, carried them back to the spring of 1863, and he repeated that the first bank was commenced in 1869, while the second dated no farther back than April, 1870. It was clear, therefore, that if the game had been diminished, it was owing to something anterior to the first erection; and if so, where was the evidence of damage? The field where the sheep were driven was one which had been laid down in grass; and supposing the defendants did on one occasion drive sheep along the driftway so as in some degree to injure Mr. Budd, was that a sufficient reason for the court to interfere? His lordship must see what a trumpety matter this was. It was admitted that since 1871 no driving of sheep had taken place. With regard to partridges, the only material suggestion was that in June, 1871, one of the defendants went across the field and disturbed the game. That charge was never brought to their knowledge till the Bill was filed, and when the thing was looked at carefully it turned out to be of no importance. It was insinuated that this was a sort of act that continued from day to day and from year to year. Was the Court called upon to try every petty question that might arise between the gamekeeper on the one side and the farmer on the other? The gamekeeper had twice been convicted before the magistrates of an assault on the shepherd, and the result of his lordship's doing what was now asked would be to transfer a sort of border warfare to that court. As regarded the point of law, the plaintiff's case was equally unsatisfactory. There was a difference between the rights given in the two leases. Mr. Budd's lease gave him the right of sporting, with the reservation that he should do no injury to the land by setting traps or snares; while the defendants were under their lease to be at liberty to set traps or snares for the purpose of killing rabbits. Moreover, any rights which Mr. Budd might have as against Mr. Hemsworth were not now in question. The defendants' lease said that they "shall not kill or destroy, but shall do their utmost to preserve, the game and fish on the land and premises hereby demised." The demise did not include the Grove, and the defendants were not bound to protect the game there. To his learned friend's statement that it was necessary that the hares and pheasants should have free ingress and egress as respected the Grove, he answered that they had never contracted to provide that, and that they were entitled to protect themselves by means of a wall.

The MASTER of the ROLLS: If the birds come on the land you must protect them.

Mr. FRY: But we may keep them from coming, and that was the object of putting up the fence.

The MASTER of the ROLLS: No doubt it is right to keep up the fence, but not to catch hares.

Mr. FRY continued: The plaintiff had taken the law into his own hands by stopping up the holes which were used to catch rabbits. The defendants might have placed the rabbit-traps at the back of the covert, but, instead of that, they had put them in one part five or six feet and in another fifteen feet from it. It was stated that they had caught hares. He ventured to say it was beneath the dignity of the Court to interfere in a dispute of that kind because eight hares had been caught in three years. He ought to mention that it appeared from the evidence that Mr. Budd was the senior partner in

the firm of solicitors who filed the bill in that suit, and no doubt was in the habit of going down there at Christmas. He did not reside there, and did not shoot over the estate as early as he would do if he were a resident.

The MASTER of the ROLLS observed that that did not affect the case in the least. A man who had hired a house and shooting must be allowed to use them when he pleased.

Mr. FRY: But no doubt the game accumulated more in consequence.

The MASTER of the ROLLS observed that the alleged injury must have been confined to the seasons of 1870 and 1871.

Mr. FRY said it was not suggested that the traps were intended for any other purpose than the trapping of rabbits. In the 11th paragraph of the Bill the plaintiff said: "The said Thomas William Budd has, ever since the said banks were erected, complained on various occasions both to the defendants and to the plaintiff, that the said trapping banks and the acts thus committed by the defendants seriously obstructed him in the enjoyment of the sporting rights so demised to the said Edward Daniell." He wanted to know where they undertook to protect Mr. Budd in his sporting rights.

Sir R. BAGGALLAY: Mr. Daniell was the lessee.

Mr. FRY: Yes, he was the lessee and transferred his lease to Mr. Budd; but the land was taken for agricultural purposes, and if the carrying out of those purposes obstructed Mr. Budd in the exercise of his shooting rights, they had nothing to do with it. The plaintiff further said that the banks "limited the feeding ground of the game sheltering in the said covert." Where did the defendants undertake not to do that? All they undertook to do was not to kill or destroy the game on the land demised to them. It was also alleged that the banks "considerably increased the difficulties in the way of the said Thomas Wm. Budd in his efforts to keep up a sufficient head of game in the said covert." There again there was no undertaking on the defendants' part. It was extremely difficult to believe that 20 young pheasants had been trampled to death as alleged; but even if that were so, they were young pheasants not on the land demised to the defendants, and the thing occurred two years ago. He must now refer with a little more particularity to the answers of the defendants than his learned friend had done. In the 8th paragraph they said that in the summer and autumn of 1863 the number of rabbits in the Grove was so great that they made repeated complaints, both verbally and by letter, to Mr. Budd and to the plaintiff, but no good result followed. Therefore the complaint of the defendants' was no idle complaint.

In reply to the Master of the Rolls,

Mr. FRY observed that although the Messrs. Manns' lease dated from 1862, the formal execution of it was postponed for some years after. On the 5th of December the defendant Fairman Joseph Mann wrote to Mr. Budd, saying that he would wait a little time and see if the rabbits and hares were killed, if not he must in self-defence employ men to kill them at night, and put up banks and wire fencing round that part of the Grove, adding that he should be sorry to cause annoyance, but that Mr. Budd could not blame him for protecting his own property from "such vermin as rabbits and hares." On the 11th of December Mr. Mann wrote a letter to the plaintiff, in which he said he was surprised and frightened at the injury done within the last few days, and that he dare not wait a day longer, and had commenced putting up wire, fencing; adding "I find more than an acre of wheat has been eaten off in a few days," and that nothing but prompt measures would save his wheat. The defendant appealed to the plaintiff to allow him for the outlay, but this was declined. The plaintiff said: "I cannot allow you for any of the expenses of protecting yourself against the rabbits, by banks and wire netting." How, then, could the plaintiff say that it was done without his knowledge or consent?

The MASTER of the ROLLS said he did not think that touched the real question, which was whether in acting as they did the defendants destroyed the game.

Mr. FRY said it was admitted in the bill that the banks were erected for the trapping of rabbits. This was put an end to in the spring of 1871 by Mr. Budd's stopping up the holes, and they had never been reopened. The only other way in which game could have been injured was by sheep being driven, and that had not been done since 1870. What remained? Want of access for the game in the covert to the land of the farm. In April 1870 the defendant Fairman Joseph Mann

sent to the plaintiff a letter in which he said that as his barley was sown he was anxious to prevent the heavy losses of last year by hares and rabbits, and asked permission to put wire fencing on the top of the grove next the Harling Road, a distance of about 220 yards. On the 6th of May the plaintiff replied, "As to the rabbits I think you must protect yourself." As regarded the young pheasants which, according to the bill, were found dead in the driftway, the defendants said they had caused particular inquiries to be made of the shepherd who had charge of the sheep, and he positively asserted that no such occurrence ever took place, and they further said that if the sheep had come upon young pheasants in the driftway in the manner suggested, they would naturally have gone back to the Grove by the way they had come out, the banks and wire fencing being on the opposite side of the driftway, and not separating the driftway from the grove. The erections complained of were of a purely protective character, and the defendants had a clear right to protect their land from the access of game. The evidence of the vicar of Shropham went to show that since he first came there, twenty years ago, the number of hares and rabbits had enormously increased, and that considerable damage had occurred in consequence. It was also in evidence that from four to six acres of land adjoining the grove had been so infested that it was now waste of time and money to cultivate them. The occupant of the adjoining farm, Mr. Robert Laad, in a letter to the defendant, dated July 27th, 1871, asking for information with respect to his own experience, said:

Since Mr. Budd has been the tenant of Shropham Hall I have always been complaining of the inordinate quantity of game. This will apply to the present and also to previous years. For in the year 1869 I felt myself so much aggrieved from the excessive damage of hares and rabbits that I employed Mr. Thomas Fisher Salter to value the damage I had sustained on 21 acres of wheat and oats near the Grove, and Mr. Salter's award was no less than £150 upon this field alone. I can also state without any doubt that the damage I have sustained from game ever since Mr. Budd has been the tenant of Shropham Hall has averaged at the least from £100 to £150 per year. This applies both to the present time and previous to the erection of the wire fences by yourself. I have always said, and I again say, I do not in any way blame you for protecting yourself as far as possible from the hares and rabbits in the Grove, and so strong were my convictions on the subject that you were only doing what was right and proper that I unhesitatingly gave you my free consent that you should erect part of the wire fence upon my bank.

The real "head and front" of their "offending" was, not that they had injured the game in the covert, but that they had erected banks for their own protection—that whereas, Mr. Budd wished his game to ramble freely over their land, they had endeavoured to protect themselves against that evil. Under these circumstances he submitted that the bill was one that ought never to have been filed, and that it should be dismissed with costs.

Mr. COZENS-HARDY followed on the same side.

Sir R. BAGGALLAY briefly replied.

In answer to a question from the MASTER of the ROLLS,

Mr. FRY said he would undertake, on behalf of the defendants, that they would not have sheep driven, or a gun fired in shooting rabbits, so as to disturb the game in the covert.

The MASTER of the ROLLS: Of course if the defendants were to shoot rabbits early in the morning, any one who shot afterwards would have very little sport.

Sir R. BAGGALLAY: I think your lordship will be of opinion that we are entitled to an injunction to restrain any improper exercise of the defendants' right to take and kill rabbits.

The MASTER of the ROLLS then asked to be furnished with a copy of the affidavits, as he wished to read them, and added that he would dispose of the case on Thursday morning.

THE JUDGMENT.—At 10 o'clock on Thursday morning his lordship gave judgment as follows: This is a suit of very unusual occurrence in this court as regards the subject of it—the important subject of the game-laws—between a gentleman who has hired some shooting and a tenant of the estate. The tenant has entered into a covenant by which he undertakes to preserve the game. The covenant is in these words: "And that they, the said Fairman Joseph Mann and John Eagling Mann, their executors, administrators, or licensed assigns, shall not kill or destroy; but shall do their utmost to preserve the game and fish on the lands and premises hereby demised, and shall not shoot or sport over the said hereby demised premises,

or set traps or snares on the banks of the coverts above ground on any part of the said lands and premises hereby demised except for taking and killing rabbits." Another part of the lease contains a provision that the defendants "shall be at liberty to kill and take the rabbits on the said farm and lands hereby demised, he and they doing no injury to the game on the said lands or the adjoining lands." Now I hold that to mean that the defendants have an express power to set traps and snares on the banks of the coverts above ground on any part of the demised premises for the purpose of taking rabbits. What they have done is this: they have raised a bank round a considerable part of the covert. There is a covert of 40 acres exactly a mile in circumference. A bank 3 feet high has been put up, and also a wire fence 2 feet high, making 5 feet altogether, and the defendants have twisted in the upper part of the fence a certain quantity of furze and the like, which makes it almost impossible for any game to run or jump over. They have also made holes in the banks where they have set traps; and, provided they set the traps only to catch rabbits, I think they were perfectly justified in doing that. I see nothing in the lease to prevent them from protecting their own land against rabbits, which diminish the quantity of produce that the land produces. It is said that these burrows under the bank occasionally catch hares. The plaintiff says that in the course of a little more than two years eight hares were caught in that way, while the defendants say they believe that only four were caught. At all events that shows the extent of the damage. Now, the game which was to be preserved is in Norfolk and Suffolk, on the borders of those two counties. That it is very plentiful appears from the account of the shooting in the covert. The number of hares, at least, must be very great, for four hundred were killed in one season; so that I don't think there can have been very serious injury to the hares. The tenant says that whenever he knew of a hare being killed he sent it up to the Hall, with an intimation as to how it was caught. There is great hostility between the parties in this suit, as, indeed, there always, or at least generally, is on questions connected with game; but, as regards the covenant which I have cited in reference to the protection of the game, so far as the matter has gone, I see nothing to deprive the defendant of the right of putting up a fence of this description, which, he says, was erected to protect his crops, and not with any view of injuring the game; and there is no allegation that the game within the coppie has been injured in the slightest degree. The plaintiff has set his keepers to fill up the hole in the bank at night. Whether he had any right to do that I do not know. If the matter had remained there, I should have had no hesitation in dealing with the case; I should have said at once that it was not a case for this court, but one in which if any injury had been received the proper course was to bring an action at law. But there is one thing in the conduct of the defendants which seems to have been a violation of the covenant; I refer to the fact that in the month of June they employed a shepherd with a dog for the purpose of driving the rabbits out of the field into the coppie, that thereby they disturbed the partridges in their nests, and that the young partridges were seen running before the dog. Now that was in my opinion a direct violation of the covenant, which the defendants had entered into to preserve the game upon the land. But then it is to be observed that it is a long time ago since that occurred, and there has been no further complaint. Indeed, the defendants say that no complaint was made of that before the suit was instituted, or they would have taken care that it should not occur again, and in fact that they have taken care, and now undertake that it shall not occur again. I am of opinion that if this had been the cause of the suit being resisted by the defendants, the Court would at all events have deprived them of the costs; but as it is, I think this is a suit which ought never to have been instituted, and I shall simply dismiss the Bill with costs.

ROYAL AGRICULTURAL SOCIETY OF IRELAND.

At the last monthly meeting of the Council held at 42, Upper Sackville-street, Dublin, Sir George Hodson, Bart., in the chair, the members present were: Lord Talbot de

Malahide, Lord Gough, Lord De Vesci, Lord Clonbrock, Baron De Robeck, Sir Allan Walsh, Bart., Hon. Charles J. Trench, Robert C. Wade, Dawson A. Milward, Wm. Donnelly, C.B., Wm. Owen, J. M. Roysse, R. M. Carden, Hans H. Woods, Edward Purdon, Charles U. Townsend, Michael Cahill, Seymour Mowbray, Hugh Harris, and Phineas Kiall.

Mr. DONNELLY again brought forward his motion, of which he had previously given notice, with regard to the propriety of keeping the lands of Ireland as free as possible from weeds. When he introduced this subject at the last meeting of the Council, an objection was raised—and very properly—as to the mode in which it could be carried out, to obviate which he proposed to add the following paragraph: "The declaration, which is to be final and conclusive, must be sent to the Secretary of the Society previous to the payment of the prize."

LORD DE VESCI asked if the person who made the declaration was to get the prize, although it might subsequently turn out that weeds were found to be on his farm?

Mr. DONNELLY replied that it was the intention of the words which he had added to his resolution that the declaration should be final and conclusive. No one, he was confident, would make a declaration which he did not believe to be true. The importance of this subject had been referred to by the Duke of Abercorn, in Derry, and by Lord Wodehouse, in Tralee.

Sir ALLAN WALSH observed that if a man had three or four farms, one of which was clean and two or three dirty, he might make a declaration that the lands of so-and-so were clean, and thus become entitled to the prize.

Mr. DONNELLY said he did not anticipate that such a thing could take place.

The Hon. CHARLES TRENCH, as a rule, objected to all declarations. They ought not to rely altogether on the declaration of the person obtaining the prize, but to insist upon having a certificate from his neighbours. The mode proposed to deal with the matter was objectionable, inasmuch as it was putting the cart before the horse.

Mr. DUNNELLY withdrew his motion, and in doing so expressed a hope that it would be taken into consideration on a future occasion.

Mr. WADE, in pursuance of a notice of motion which he had placed on the minutes, proposed: "That in future members of the Society be limited to two free entries of stock or other animals, or produce, to be entered for competition at the Society's annual cattle show." The members of the Council, he said, were doubtless aware that the receipts and expenses were undertaken by the local committee, and amongst the former were the entrance fees paid by the exhibitors. This subject he had brought before the Council that time twelve months, and as it was of some importance to the members, he did so again.

Mr. WOODS seconded the resolution.

Mr. MOWBRAY believed it would have the effect of making exhibitors send in as few animals as possible. For his part, if he had to pay for every entry, his entries would be very few, instead of, as hitherto, very large. He moved, as an amendment, that there should be one free entry in every section.

Mr. OWEN seconded the amendment, which was adopted.

Messrs. Townsend and Roysse were appointed judges of entries for labourers' cottages entered for competition during the ensuing year.

A draft report of an agreement entered into between the Council of the Society and the local committee of the Belfast show and the North-East Agricultural Association was submitted, and, after some slight technical alterations, approved of.

The CHAIRMAN stated that the report of the Joint Flax Committee had been laid on the table, which wound up the whole affair.

The Hon. Mr. TRENCH observed that an application had been made to the Government to continue to extend the grant previously given for the encouragement of the growth of flax in Ireland, and he understood a positive answer had been received, refusing any further grant.

The following were elected members of the Society: Wm. S. Garnett, Williamstown, Kells; Sydney W. J. Wright, Bridgeview, Killarney; J. Curteyn, Castle Curteyn, Killarney; and Arthur J. Owen, Blesinton.

AN ANONYMOUS ASSEMBLY.

There is nothing more noticeable when reviewing the progress of agriculture during the last quarter of a century than the improvement which has characterised the conduct of our public meetings or social gatherings. There was a time when the long clay pipe, the somewhat boisterous stave, and the "hot stopping" were regarded as the chief inducements for getting farmers together. But these days have gradually passed away, and, with some experience of other large assemblies, we are inclined to think that nowhere will men as a rule keep closer to the point or carry themselves more becomingly than the occupiers of land when they draw into a focus at a Society's show or a Club discussion. More information has been disseminated, more intelligence developed by such a means than through any other cause which could be spoken to. By the further aid of a good reliable report this system of mutual advantage comes to be almost infinitely extended. Many a man who would fight shy of a Royal essay, although he found the pages ready "cut" to his hand, will eagerly turn to see what his next-door neighbour had to say, or some more famous agriculturist to offer on the merits of the principle under consideration.

It would seem, however, that the management of these meetings is even now open to some signal amendment. To carry the weight and command the respect they should do, the main regulation for any such occasion must be that these debates are strictly anonymous. Any member may say anything he pleases, but no member must be made liable for anything which he does say. The meeting may resolve to speak out as one man, but care must be taken that the name of this one man is never mentioned. Under our glorious constitution every Englishman has a right to freedom of opinion, to freedom of expression, and to gag the Press. Strange as it may sound to some, this is the course already struck out by the members of the Blandford Farmers' Club; for at a recent meeting, according to a local journal, "Our reporter on entering the room was requested by the chairman to give a general outline of the discussion, without publishing the names of the speakers." It is just possible that on the face of it there might have been some special reason for so very extraordinary a proceeding. The Blandford Farmers' Club might be about to attack the Game abuse as it existed in the county or district, or to point a moral from Lord Leicester's lease as to the state of things still sanctioned in the way of tenure by some of their own landlords. Under such circumstances it might be politic, although we gravely doubt the force of such policy, to withhold names, or more consistently to sit with closed doors. The question, however, debated on Saturday week was hardly so delicate a subject as either of those we have indicated, as it turned simply on "the Management of a Breeding Flock, with special reference to the present Lambing Season." Manifestly this is a very useful and appropriate text-word for an association of West-Country farmers to take up, but at the same time there is surely nothing dangerous in the discussion of such a topic! There would, though, threaten to be something more beneath the surface, for no sooner were the reporters ordered to withhold names than the Blandford Club commenced an attack on an unfortunate man not present, without any ceremony or hesitation as to giving *his* name. Thus the very "first speaker"—and it will be better to distinguish him as Mr. Thingumbob—referring to a letter from Mr. Mechi, boldly declared that "as

practical farmers they knew as well how to take care of their flocks as men who had been brought up as shopkeepers!" This was very severe, no doubt, and Thingumbob was straightway followed by Mr. What-d'ye-call-un, who, as to Mr. Mechi and his opinions, said: "Everyone—the shopkeeper, the lawyer, and writers for the public press—all thought they could instruct the farmer in his business, but he must strongly protest against this. As practical men, they knew their business far better than such persons could inform them, and he considered it would be more to their credit if such persons would mind their own affairs. When they were told by such men as Mr. Mechi that they did not know how properly to manage their sheep, it was a stigma on them as practical men, but he held that, as to all practical operations on a farm, they must know more than such a man as Mr. Mechi, and it was evident he knew but little about the subject he had written upon." This is all very lamentable, no doubt—that everybody from Virgil and Cicero down to Mr. Mechi and Mr. Wreu Hoskyns will talk and write about agriculture, and the Blandford Farmers' Club should do everything in its power to put a stop to so rapidly increasing an evil. But would not the members of the Blandford Club do more in this way if they were openly to give their own names as well as opinions in opposition to those of Mr. Mechi. However, these speakers clearly struck the key-note, and ultimately the following straightforward resolution was carried unanimously: "That although the discussion of the subject of the management of a breeding stock has been sustained by many valuable remarks, it is considered by all present that to trace the causes of the losses which in many instances have been sustained this year, as on some former occasions, is quite impossible, and that it is quite clear opinions which have been publicly expressed by some non-practical pretenders are worthless." So that, after all, much did not come of these valuable remarks beyond the denunciation of certain non-practical pretenders by an anonymous assembly, a society of nobodies, a manifesto of shades and shadows. In philosophers' schools the boast that a man has nothing to learn is held to be the surest sign of ignorance.

There was only one tangible man at the Dorchester meeting, and this was the President, whose name has been published through some unpardonable mistake or more unwarrantable intention on the part of the Press. There are few men in England who have had more experience of the public life of Agriculture than Mr. Henry Fookes; as a recognized judge of sheep he is always about, and as an acting steward he must have a deal to do with the arrangements of the Bath and West of England Society's meetings and shows. And Mr. Fookes was the Chairman at Blandford; and Mr. Fookes directed the reporters to withhold the names of the speakers, and Mr. Fookes, as it seems to us, thus became in some degree responsible for the proceedings. As a famous flock-master and Southdown authority naturally he must have had something to say, although it is not so clear how he did say this, unless when he "carefully summed up." Did he sum up for or against Thingumbob, who answered Mr. Mechi's argument on sheep having too many turnips by calling him a shop-keeper? Did he go with the objection to shop-keepers, and lawyers, and writers writing about farming? Or how did he stand with another speaker, who was bold enough to quote something from some agricultural

work about Mr. Woods' advice as to not gorging sheep with turnips? How a man like Mr. Fookes could have committed himself to such a business, or how he could ever suffer his own name to blaze forth from this misty nonentity is almost inconceivable! In very consistency the name of the Chairman, the name of the Club, and the name of the subject should also have been scrupulously withheld. However, it was announced that at the next meeting, Dairy Management will be the thesis of the evening, when the opening address will be delivered by the well-known—Mr. No-we-never-mention-him.

Nothing can be more melancholy than the general tone of this anonymous and nondescript meeting, which seems to

throw us back at least half-a-century in the history of agriculture. We are by no means disciples of Mr. Mechi, we are in no way committed to his many hobbies and theories, but we must protest against the treatment to which he was subjected under cover of a cloud at the Blandford Farmers' Club. It may be urged, as a plea for the system adopted, that the full report will be kept back for the Club's annual volume of transactions, when the members will, at least, have the opportunity of seeing their own names in print. If the ensuing meetings threaten to be of anything the same character as that just held, it might be better if these quasi-anonymous chronicles were altogether confined to private circulation.

CIRENCESTER CHAMBER OF AGRICULTURE.

EXPERIMENTS IN AGRICULTURE.

At the monthly meeting, Sir Michael Hicks Beach, Bart., M.P., the president of the Chamber, in the chair, Professor WRIGHTSON said:

It is two years since you have heard a report of the proceedings of the Experimental Committee. No small amount of work has been expended upon this department of the chamber: I do not allude so much to my efforts which have been so kindly referred to by Sir Michael, or to the work of others at the college; but these experiments have involved an immense amount of work upon the part of those gentlemen who kindly co-operated with us in conducting the series. The amount of work which has been done may perhaps have warranted us in expecting large results; and I think we have learnt one thing at least from the experiments, and that is the extreme difficulty of conducting agricultural experiments of all. We have, I think you will agree with me, fallen upon rather unfortunate seasons, not that we ought to blame the seasons for everything, but at the same time when we began our experiments in 1868 upon roots, we were rather balked by a dry season. In 1869 I laid before you a report which really did contain a great deal of interesting matter, and we came to some conclusions with regard to wheat, barley and swede cultivation. In 1870 we for a second time came upon an unfortunate season, so that we again felt ourselves a little balked. For 1872 I have something to show you; a great deal of pains has been taken, and I think you will find that we can generalise a little—that is to say, we have obtained some definite results. Now before I begin to speak of the swede experiments in 1871, I have just a few words to say upon the experiments of 1870 upon cereals. These results were very much modified by the drought. But I think the report of those results may yet be of use. In the last report of the experimental committee there was a little compendious table which obtained a considerable amount of circulation; and perhaps was one of the most useful portions of our undertaking in 1869. It referred to the amount of produce in wheat where we applied nitrate of soda, and the form of the table was this, the produce in pounds of wheat for every 100lbs. of nitrate of soda applied. The result in twelve plots was an increase of 234lbs. for every 100lbs. of nitrate used. That is to say, every 100lbs. gave considerably more than double its weight in wheat, and that was where $1\frac{1}{2}$ cwt. was used per acre. With the double dressing, every 100lbs. produced 257lbs. of wheat, or $2\frac{1}{2}$ lbs. of wheat for every pound of nitrate of soda applied. Now, we enter upon the results of 1871. I am able to present you with this: that where this application of nitrate of soda was used, for every 100lbs. of nitrate we obtained 208lbs. of wheat upon six plots, that gives about an average of 2lbs. wheat for every 1lb. of nitrate, with $1\frac{1}{2}$ cwt. per acre. Then the double dressing or 3 cwt. per acre produced 203lbs. of wheat, so that the season of 1871 gives a less result, but at the same time a result not altogether discordant with 1870. Then we next enter upon another subject, and that is the wide drilling of wheat and barley in 1869. The result of wide drilling of wheat and barley was to a certain extent discordant, that is to say some-

times better and sometimes worse than the ordinary method. In Mr. Smith's, of Bibury, results we obtained a decided advantage by drilling wide; that was upon land in fine condition. Mr. Anderson also on behalf of Lord Bathurst undertook similar experiments, which almost up to the harvest seemed to promise a more abundant crop than the ordinary drilled wheat, but it became mildewed, though the straw was heavier, the grain was less in yield than the ordinary crops. Our results in wide-drilling wheat was not such as to induce us to alter our system of drilling wheat to any great extent, but I think it may teach us that wheat may be drilled much wider without any great sacrifice, and there may be times when it may be desirable to sow wide, say on foul land, in order that we may practise a greater amount of interculture. The barley results were more encouraging than the wheat. I obtained a distinctly larger crop in several plots of barley which was wide drilled in 1868. Mr. Iles in 1869 obtained encouraging results. The wide drilled barley (16 inches) really did in many cases give a better yield than the ordinary crop. The same experiments were repeated by me in 1870. I had six plots which were drilled 16 inches at the rate of $1\frac{1}{4}$ bushels per acre, and the yield was $30\frac{1}{2}$ bushels per acre against 33 at the usual width. So that with a less quantity of seed, I obtained $30\frac{1}{2}$ instead of 33. Then we tried another plan in which alternate rows 16 and 8 inches apart with two bushels of seed to the acre were used, and again I obtained $30\frac{1}{2}$ bushels. So that you saved in the seed but lost in the crop. But circumstances might arise in which it would be advisable to drill wide, and from the results of these experiments we need not fear to do so. Mr. Millard, a graduate of the Cirencester College, has been active in making experiments in Suffolk in combination with this Chamber, and has sent me the results he obtained on drilled barley during the past season. The barley was after turnips, sown on April 3 and hoed out on 1st May, every alternate row being removed. But a heavy wind came and the wide drilled barley specially suffered, much of the grain being blown out. The crop upon 3 plots was decidedly better than that grown according to the ordinary method, and the other plots were in some cases about equal and in others worse. With reference to our swede experiments, we tried some in 1870, and those results were I must confess difficult to make anything of. Here are Mr. H. Ruck's results in which we find that a difference in the treatment of the land had had a greater effect apparently than any of the manures he applied. Mr. Ruck's plots might have been even divided across by a line, one half of the plots being upon a stale furrow, and the other half upon a fresh furrow. The stale furrow plots produced 15 tons, $15\frac{1}{2}$ tons, $13\frac{3}{4}$ tons, and 14 tons. The fresh furrows 14 tons, 14 tons, 14 tons, 13 tons, and 12 tons per acre. There was a greater difference between the stale and fresh furrows than was shown by comparing any of the manured plots together. The drought exercised such an influence that the unmanured plots were as good as the manured. Now I proceed to the experiments of the past year. We were determined to obtain some good results if it were possible. Accordingly ten series of experiments were sent out with a view to solving the

following questions. Firstly—What is the effect of a heavy dressing of superphosphate contrasted with a light dressing? Secondly, What is the comparative merit of bone superphosphate and mineral superphosphate? Thirdly, Whether any means could be taken to make mineral superphosphate equal in effect to bone superphosphate? Fourthly, To test the value of guano as a manure in this district Fifthly, To learn the effect of treating guano with sulphuric acid so as to fix the ammonia. The following series of manures is as then arranged: Mineral superphosphate (heavy dressing), 6 cwt.; mineral superphosphate (light dressing), 3 cwt.; mineral superphosphate treated with organic matter, in a manner suggested by Professor Church, in order to approximate to the composition of bone superphosphate; dissolved bones, 2 cwt.; Peruvian guano, 2 cwt.; sulphated Peruvian guano, 2 cwt. The dissolved bones were found to contain 19 per cent. of soluble phosphoric acid, whilst Mr. Lawes' mineral superphosphate contained 13 per cent. It was then in the proportion of 2 to 3; therefore, to compare with the 3 cwt. of mineral superphosphate, we used 2 cwt. of dissolved bones. We were disappointed in our experiment with dissolved bones. I wrote to Messrs. Proctor for bone superphosphate, but since there seemed a difficulty in obtaining pure bone superphosphate, I applied to Mr. Lawes for it, that I might test a pure bone superphosphate against a mineral superphosphate. But it subsequently transpired that "dissolved bones" is only a trade expression, not signifying a superphosphate made from bones, but merely a superphosphate of superior richness. Now as to the sulphated guano. This was tried with 2 cwt. of guano to which was added 28lbs. of diluted acid, first mixed with 50lbs. of sawdust. I have now to give you the history of the ten series. I will take our disappointments first. One experimentalist was not able to use the manures, and they remained stored for future operations. Two lots went into Suffolk, and there met with a dry season and disease and insect attacks which interfered seriously with the result. Seven were applied in this neighbourhood with the following results. Mr. Parsons, of Coates, very kindly undertook a series, but it was met with difficulties in the form of wireworm, as the plots were placed upon newly-broken land. This rendered the results very unreliable. Mr. Playne, of Chalford, wrote to me as follows: "The experiments were very unsatisfactory, the whole field being patchy; the swedes were hoed Dec. 14 and 16. The field had been in sainfoin seven or eight years previously. Mr. Swanwick's plots improved all the way from west to east, so that the unmanured plots on the east were absolutely better than manured plots on the west, thereby showing that the natural or artificial fertility of the land had a greater effect than the manures applied." I will now turn to some more useful results. Out of ten experiments you have 4 or 5 bearing valuable lessons. Whether this is to be considered a fair proportion I am hardly prepared to say, but if out of every ten attempts we make in life we are successful in four or five, or if among every ten men we meet four or five do not disappoint us, perhaps we may consider ourselves fortunate. Let us think the same regarding our plots. On these diagrams you have the results of the last year's root crops before you. The items may be considered separately, and again you may consider them as a whole. I think we may take any given experiment to be of most value when we find its result corresponding with the average result. We will take Lord Bathurst's first. Lord Bathurst placed land at our disposal in a way very valuable to the Chamber, and I am sure we have to thank Mr. Anderson for the way in which he has, year after year, undertaken these experiments. I will briefly relate the kind of cultivation pursued. I think you know the land upon which these experiments were tried, and I am not wrong in saying that it is of the customary character of our Cotswold land—a brashy soil. But Mr. Anderson is here, and will probably explain further. You have there turnips after wheat, cultivated with Coleman's cultivators, ploughed last week in November, stirred first week in May, then cultivated with the usual harrowing, rolling, &c., and sown with swedes after wheat, 4 lbs. of swede seed being used. Now, gentlemen, I must just remind you that in our method of conducting these experiments it is very difficult to get the drill to exactly sow the quantities of manure prescribed for so small a plot. We have been in the habit of applying the manure by hand along the top of the rows. The manures are thus not so fully incorporated with the soil as I

should like them to be. This was the plan followed upon Lord Bathurst's home farm. The plots (one-twentieth of an acre each), 10 drills each, 23 inches apart, and each plot was 173 links long. The results are given in the diagram. [Professor Wrightson then proceeded to explain a number of tables, &c., which were hanging on the walls.] Perhaps the fairest way is to take the average, which you will see in this table:

Table showing the Average Increase over Unmanured Plots in Swede Experiments, 1871.

Names of Experimenters	6 cwt. of Min. Super.	3 cwt. of Min. Super.	3 cwt. of Min. Super. and Organic Matter.	2 cwt. of Dissolved Bones.	2 cwt. of Guano.	2 cwt. of Guano Sulphated.	Average of 4 Ground Plots.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Earl Bathurst.	2.25	1.72	2.38	1.23	3.74	3.61	3.69
Rev. T. Maurice.	3.35	3.25	3.34	2.70	3.63	3.50	3.52
Mr. Edmonds.	4.34	5.00	4.89	5.27	4.14	4.00	4.09
Mr. Hobbs.	3.72	3.39	3.95	2.72	2.57	2.00	2.23
Average.....	3.11	2.84	3.64	2.98	3.53	3.28	3.40

Now as to the questions which our series was intended to elucidate. First, dressing with 6 cwt. of superphosphate. Answer: 6 cwt. gave a better result than the 3 cwt., but the result from the 3 cwt. taken relatively to the cost paid better. Second question: Bone *versus* mineral superphosphate. Here a distinct answer is given; the dissolved bones appear slightly worse than the 3 cwt. of mineral superphosphate. The most interesting point is where we employed the organic matter you will observe that the 3 cwt. has increased the yield above that of the 6 cwt., and that the result is followed out in the other experiments. Guano gives a considerable higher increase than any of the rest. The average of the guano is 3.69. The results are these; That 6 cwt. of superphosphate is not profitably employed against 3 cwt. That the dissolved bones give a dubious result. That the manure mixed with organic matter has been followed with good results; and that this season has been a good one for guano. I think the peculiar character of this season has been one of the reasons why guano has been so beneficial. Then, again, the advantage of fixing the ammonia by sulphating does not appear. Now the Rev. T. Maurice's experiments. These manures were applied on June 3, in the same manner, sown by the dry drill; the average distance between the drills was 27 inches, and 20 drills to a plot. These experiments were, on the whole, satisfactory. First answer with respect to heavy or light dressing. You will see from the diagrams that the Rev. Mr. Maurice's plots give a better amount with 6 cwt. than with 3 cwt., the same as Lord Bathurst's, but the increase is not equivalent to the increase of the dressing applied. Organic matter gives a decided increase, growing a larger yield than either of the others. Guano, both ordinary and sulphated, exerted a most marked effect in this series, and in this respect agrees well with the other tabulated results, but here also the sulphated guano was not observed to be superior to the ordinary guano. Mr. Edmonds' experiments come next, and the most marked effects were produced upon his farm. I have before alluded to the somewhat imperfect manner which we have yet followed in applying manures, I wish we could mix them more with the soil, but that our manures do exercise considerable effect is I think evident from such results as have been obtained by Mr. Edmonds. His series were carried out upon very poor land—upon Maccaroni Farm, which for many years had had no farmyard manure—but which he had taken to lately. You see Mr. Edmonds does not get a large crop; he gets a small crop, 7 or 8 tons to the acre, but the increase was more marked in his case. The table shows that although the effects are greater, yet the questions are answered in the same manner as in Lord Bathurst's and Mr. Maurice's experiments. They bear out that a heavy dressing of superphosphate does not seem to have an equal effect with a moderate dressing of 3 cwt. Mr. Edmonds got a better result with 3 cwt. than with 6. Mr. Edmonds' organic matter gives a better increase. He did not get so good results with guano as with superphosphate. The last experiments are those of Mr. Hobbs, and his results agree with the other three. Again we have a fair result in the case of guano. The

lessons which appear to occur to my mind are that according to the experiments of this last year we are not able to show that 6 cwt. of mineral superphosphate can be applied with a greater advantage than 3 cwt. The averages from 6 cwt. equal 3-41 tons; 3 cwt. equal 2-81. But if you compare the organic matter results you will find that it gives a higher result than the 6 cwt. Guano comes next to manure with organic material in it. Now, the cost of the increased crop. The superphosphate was purchased at 6s. per cwt., and when it was applied the increase obtained was at the rate of 10s. 6d. to the ton. With 3 cwt. the increase was obtained at the rate of 6s. 4d. per ton. With 3 cwt. of mineral superphosphate with organic matter the increase was obtained at 5s. per ton. Two cwt. of dissolved bones gave an increase to swedes at the rate of 4s. 8d. a ton, and the 2 cwt. of treated guano gave an increase of swedes at the rate of 8s. a ton; and, lastly, the four guano plots gave an increase at a cost of 8s. 5d. per ton. So although for quantity the dissolved bones did not appear favourably, it was cheapest, giving an increase at 4s. 8d. a ton; and the 3 cwt. was next cheapest with 5s. per ton. Lastly, with reference to our experiments, I should be very glad if some practical suggestions could be given as to the manner in which to carry them out. I think the system of applying the manure to the top of the soil does not give the full effect. Then, with reference to the heavy dressing, it is a pretty clear conclusion that the heavy dressing of 6 cwt. of superphosphate was not applied with advantage; but is it not a question whether the maximum effect which could be produced by heavy dressings of mixed manures would not be more than this? Then, again, I think we cannot look upon the results produced by guano without thinking that guano has been neglected in this neighbourhood. I believe this is very little used, and yet it becomes a question whether we should not use more. But is it not likely that a mixture of guano and superphosphate might be of decided advantage?

The Rev. T. MAURICE wished to ask what the organic matter alluded to consisted of, because one hardly knew how to procure it? The organic matter seemed to have given the best results, with reference to a mixture of superphosphate and guano, for many years he had used 2 cwt. of superphosphate with 1 cwt. of guano with great advantage until 1869 and 1870. In those dry seasons he found the crops, he fancied, rather worse—rather burnt as they said, by the excess of the manure. So that in the present year he had not followed that plan; though for several years the result was very good indeed.

Professor CHURCH said the object of mixing a small quantity of organic matter with the mineral superphosphate was in order to supply those ingredients to the mineral superphosphate in which it was deficient, and which they imagined they had got in the dissolved bones. But when they found that the dissolved bones were not really dissolved bones at all, but only contained at the most a little bone-ash, it then became a matter of serious consideration whether they should introduce a nitrogenous substance with the mineral superphosphate in order to make an approximation to dissolved bones. They tried straw, but found they could not mix it properly with the superphosphate. They tried several other vegetable matters of a low manurial value, and they managed at last to make a mixture of certain vegetable waste matter with a little miller's refuse, containing, of course, a small amount of nitrogenous substance which was estimated by analysis. There was one other point to which he wished to refer in reference to this organic matter. It was highly desirable to mix such a substance with mineral superphosphate, so as to approximate it to the true dissolved bones, for these contained not only nitrogenous matter, but also decomposing carbonaceous substances. With reference to guano, referring to the register of rainfall, he found on looking at his register of rainfall that the season of 1871 was wet from June to October. During this period nearly 18 inches of rain fell in the neighbourhood of Cirencester. Now this was precisely the condition under which they found that guano in a light soil gives most beneficial result, and that it so answered whether sulphated or not. In a dry season they would have found that sulphated guano had told better than ordinary guano.

Professor WRIGHTSON said Mr. Playne's results made further confirmation of the advantages of guano that year.

Mr. WARNER asked what was the composition of the dissolved bones?

Professor CHURCH said they were made not of unburnt bone but of mineral phosphates, mixed perhaps with some amount of bone ash or something equivalent to it, and they were more concentrated than common mineral superphosphates.

The PRESIDENT wished the gentlemen who had taken practical part in the experiments to address them.

Mr. W. EDMONDS thought Professor Wrightson had explained so clearly that little remained to be said. One result he had noticed was the superior effect of manures on land in a bad condition. If they compared his results with Lord Bathurst's they would see this. Lord Bathurst he believed obtained 14 tons per acre—his amounted to 6 tons; a great difference. He remembered Mr. Moore, Lord Radnor's steward, used to say he employed no artificial manure, only that produced by the farm itself on the theory that a farm ought to support itself. He obtained the prize for the best swedes. It was to be wished they could farm so as to make the beef and mutton produce the manure instead of having to buy it. There was a little quantity of manure left over in that supplied him and this was applied to 16 swedes which weighed 21 lbs. altogether. On the next plot which had no manure there was only 5 lbs. weight of swedes, which showed that the superphosphate had a great effect.

Mr. R. A. ANDERSON said that within the last twelve years a surveyor had walked over the ground used to make the experiments upon by Lord Bathurst, and he (Mr. Anderson) asked the value of it. The surveyor replied that it might be worth 17s. an acre. That showed the state of the land. With regard to the mixture of manures he thought the table before them very interesting indeed. The land upon which those swedes were made was manured in no way whatever previous to the application of the artificial manures. There was no farm-yard manure upon it. The dressing the crop had was 3 cwt. of superphosphate to $\frac{1}{2}$ cwt. of guano—all put in with the liquid drill. It was liquid manure. Mr. Church had explained the effect. It actually appeared that year that guano had a striking effect. If he understood rightly it appeared that in the use of artificial manures they could not go beyond a certain limit. Some people thought they could manure land to any extent, and that the produce would be in proportion. They found in those tables that 6 cwt. does not produce more than 3 cwt.; if that was so it was a great and important point. He thought they were all very much indebted to Mr. Wrightson, and he was sure every gentleman who had undertaken these experiments did so as a duty to the agricultural community at large.

Mr. W. J. EDMONDS said the tables showed the great help of manure to land in a healthy condition. Mr. Anderson had said that the land upon which Lord Bathurst experimented had been made to be worth 17s.; the land he (Mr. Edmonds) grew his swedes upon was of the value of 23s. per acre.

Mr. HOBBS said the land upon which his experiments had been conducted had been about 23 years in his occupation. He could quite agree with Mr. Edmonds that the effect of manure showed more on land in bad, than on land in good condition. Although he succeeded in getting a good crop, he never saw the slightest difference in the plots.

Mr. PLAYNE felt much indebted for the explanation about dissolved bones. His system had been to get bones and dissolve them himself, and the result had been particularly advantageous.

The PRESIDENT said one or two points had occurred to him. The first was the great justice of the remark as to the difficulty of making agricultural experiments and relying upon the results each farmer obtained. When they looked at the great difference between the seasons, and the constitution of the soil in different parts of the same fields, they could see this plainly. Now, looking through the report of the experiments adopted by the Chamber in the previous years, it struck him very forcibly from this that the two causes to which he alluded had really prevented them from obtaining any valuable general results from the experiments of that year. He thought they would all be opinion that that could not be said with respect to the experiments of the past year just laid before them. At any rate, they had these general results, that it appeared that 3 cwt. of superphosphate practically did as well as 6 cwt.; and, secondly, that the mixture of organic matter with superphosphate had an advantage. Mr. Anderson had told them that the land upon which the experiments had been made was only worth 17s. an acre some years ago. He could only say

that if that was the case it did great credit to Mr. Anderson's management of the farm during that period. He wished to ask a question of Professor Wrightson. There seemed to be no doubt if a certain amount of mineral superphosphate was applied upon land previously badly farmed the improvement which can be traced to that will in proportion be very much greater than when the same amount of superphosphate was applied upon land well farmed. But would that result be the same of bad land against good land? Taking land of a poor character and land of a good character, upon both of which equal expense had been incurred in farming, would the results show so much greater proportion?

Mr. E. RUCK said it was not safe to use more than 40lbs. of guano with liquid manure.

Professor WRIGHTSON said there were paragraphs in the report of the experiments of 1869 bearing upon the point of how far increasing the amount of superphosphate used, would cause a corresponding increase in the crops. The results obtained by Mr. Plumbé showed no increase by using an increase of manure. This was borne out by experiments upon Lord Bathurst's Home farm in 1868. In 1867 he tried the result of heavy dressing upon swedes, and the crop produced by 8

cwt. was no better than that grown by six. Sir Michael's question was a difficult one to answer. Just as they had land out of condition responding to dressings so they should expect poor land to respond to dressings in a more marked manner. The effect of different manures upon different lands was exceedingly difficult to value; manure which might be applied beneficially to land here is so very various in its effects in different parts of the country. In Northumberland half a ton of superphosphate could be applied per acre. So that there seemed to be a great deal of difference caused by difference of soil.

The PRESIDENT read a form of thanks which he had drawn up:—"That the thanks of the Chamber be given to Professor Wrightson for the able manner in which he had described the experiments adopted in 1870; and also to the gentlemen upon whose land the experiments had been carried out."

Mr. R. LLES seconded the vote. Mr. Edmonds' land, who had got a greater increase than any one else, was not poorer land, but had been out of condition. He could not agree with Professor Wrightson that poor land would answer very good farming, better than good land. He found pretty good and very much out of condition, would show greater results from artificial manures than any other.

IXWORTH FARMERS' CLUB.

STEAM PLOUGHING.

At the last meeting a paper on Steam Cultivation, by Mr. E. Greene, M.P., the president of the club, who was unavoidably absent, was read by Mr. W. Manfield, of Ixworth Thorpe. Mr. P. Huddleston, vice-president of the Club, was in the chair, and the vice-chair was taken by Mr. J. Peto, of Barningham.

Mr. MANFIELD then read the following: My object this evening in calling your attention to steam cultivation is not so much to give my own views on the subject as to elicit from those amongst you who have had land so cultivated, your experience of its beneficial results or otherwise. There is no doubt whatever that agriculturists are more than ever called upon to increase the fertility of the soil, to meet increasing rents, labour, and general expenses. I think we are all pretty well agreed as to what can be done with land under the present system of shallow cultivation and high manuring. We have now to consider whether we are turning to the best account the earth which God has given us for the production of food for man, as we must ever bear in mind that if it is practicable to make productive twelve inches of the soil instead of six it will materially aid the farmer in meeting increased expenses. There is one point I would impress upon your minds, viz., that in advocating deep cultivation it is not the ploughing deep which brings up the dead soil, but the thoroughly stirring the land to a greater depth than can be done by horses, and thus breaking through the hard pan, which has prevented the roots from penetrating deep, and, moreover, the fertilising of subsoil, which is now of no use. I have had no experience of steam cultivation on heavy land; on light land I carried it out extensively, and feel quite sure much benefit is derived from it, especially in a dry season, as I observed my crops held out longer in the drought than those of my neighbours who have not adopted this treatment; but, undoubtedly, it is on the heavy soils where it will prove of most value. We have all heard of the Lois Weedon system, and although not one to be carried out on any large scale, still the fact that Mr. Smith was enabled year after year to grow wheat, without manure, from deep cultivation, shows that there is a productiveness in the land which we have not yet touched. I will quote Professor Voelcker on the value of deep cultivation. He says: "I am quite certain that the steam cultivator would do wonders on cold, stiff clays, for they contain, practically speaking, an inexhaustible store of mineral food for plants, which has to be unlocked by air. There is also no doubt whatever that the percolation of water in strong soils is greatly increased from deep cultivation." I believe every one in this room will agree with me that rapid strides in improving the culture of the soil have been made in the last twenty years, and I think they will also agree with me that there is yet left

much to be done. I believe it would repay any one desirous of informing himself on the benefits of steam cultivation to visit Mr. Smith's farm at Woolston, who may be called the father of deep cultivation by steam. No doubt one of the hindrances to good cultivation are small fields with too many hedgerows, for sun and air are essential to the full development of plants as to healthy human life. There are other matters of vital importance which must follow in the train of these improvements, one of which is the care required in converting straw into manure; but I think this is a question well worthy of a separate discussion. There is, no doubt, a problem still to be solved, viz., how to bring steam power within the reach of all farmers at a reasonable cost. In this county, at present, although we are much indebted to the spirited enterprise of some of our neighbours, still, practically, but very few can participate in its benefits. In many countries steam ploughing companies are, I believe, working successfully. I would warn you against expecting too much from the first crop after steam cultivation, as it takes a time for the land, so to speak, to accommodate itself to the new circumstances. I hope steps will be taken in this neighbourhood to enable all to partake of the benefits of deep cultivation, as it must be borne in mind that although the first expense of about 30s. per acre, to cultivate twelve inches deep, appears heavy, it is spread over many years, as it will not require to be done frequently. I am of opinion the improved production will amply remunerate the outlay. I feel that in this paper I have only skimmed the subject, but I am quite sure it will elicit from you some valuable remarks. I feel assured the one object of this club is to do all in its power to find out the best method of developing the resources of the land, and that it is determined, as far as in it lies, that agriculture shall keep pace with the progress of the age. I must again regret being absent this evening, and I hope nothing may prevent my presence amongst you on the next occasion, as it is highly gratifying to me to find how the Ixworth Farmers' Club has increased in prosperity, and in advancing agricultural science in this neighbourhood.

Mr. MANFIELD said they must all agree that steam cultivation was very desirable. Mr. Greene in his paper spoke of the increased depth of the soil, and said he thought that if they could get a depth twelve inches it would be better than six inches, but he (the speaker) did not think they would double their produce by so doing. With regard to the pan, there were some soils where there was a very hard pan, but not so hard that roots could not penetrate it, there were some roots which went a great deal deeper than the land was ploughed.

Mr. HARRISON differed from that statement.

Mr. MANFIELD repeated his assertion that many of their

ordinary roofs went a great deal deeper into the soil than they ploughed. He thought it was quite desirable to break that pan, but he didn't think there would be so much benefit derived from it as some people imagined. Steam ploughing and cultivation broke up the land in a way that no other power could; and there was another thing, the treading of the horses was avoided, they got a greater depth of soil and in a much better condition. He found one class of gentlemen whom it did not suit, and they were the hunters, for they frequently went a considerable way round to avoid crossing a piece. He had had fifty to sixty acres done this year, and he found that it had cost him about 25s. per acre, and he thought it was very cheap for the money. It had generally been thought that the working should be confined to a very few months in the year; his was done in November, and it had answered remarkably well, and he believed that if worked whilst the weather continued fine it might be worked very profitably. Wet weather should be avoided, and he could imagine that steam cultivation under unfavourable circumstances would do just as much harm as it would do good under more favourable circumstances. He then referred to what is known as the roundabout system, and that with two engines, the latter of which he thought was preferable. The great question was, however, how could the system be made payable to them in that neighbourhood? He did not see his way clear how it could be. Although they found some gentlemen had established the sets of apparatus, they did not find their examples followed, and where there was only one set in a neighbourhood it was impossible for many people to have the advantage of that one. There were several hindrances to the steam cultivator. One was that much more expense was incurred in cultivating a small and unevenly shaped field than there was in square fields. Another thing was the immense cost of the apparatus; and there did not seem to be any probability of their becoming cheaper whilst iron was so dear and mechanics' wages were on the rise. Although he was perfectly satisfied with the price he found that it was quite different a few years ago, for he found on reference that some time back there were gentlemen in this neighbourhood who were cultivating their land by steam, and at a less cost than they did now. Mr. Kersey Cooper, for instance, had cultivated his land for 3s. 4d. per acre, and Mr. Greene had cultivated some as well, including wear and tear, at 4s. 11d. per acre. That was very different to what they paid now. He believed there was a great future for steam cultivation; he hoped to see the time come when they would be able to get a good paying crop every year. He did not see why it should not be. He did not at all hold with the four-course system; he wanted to see the land cultivated so that it should grow a crop every year.

Mr. J. STURGEON said he had had some little experience in steam cultivation on his heavy land. He began it four years ago last July, and he had been doing it ever since, when he could get the machines. They could not always get them when they wanted them. Every year that he had done it it had answered his purpose very well. He begged to differ from Mr. Manfield in one point, his land was so much drier under steam-cultivation, that the hunters might ride over it better than they could any where else. The horses would not go in half so deep as they did when they didn't cultivate by steam. He had always drawn water furrows, but he had never seen any water in them even in hot weather, since he had employed the system.

Colonel WILSON said perhaps Mr. Sturgeon had no blue clay subsoil.

Mr. STURGEON said some of his land was. He was so satisfied with the system, that if he could get it he should do a great deal more than he had done. He had paid 30s. per acre for his. But he was not so much afraid of the price as he was of not getting the machine when he wanted it. He wanted it about a month after harvest. He was quite sure that on his land it had paid him very well. He had always said that he would be one to make a company to have a steam cultivator, and he said so still. Nothing in the shape of farming ever paid him so well as steam cultivation.

Mr. PETO, the Vice-Chairman, said he had not had much experience in steam cultivation, but he was very pleased to find that his neighbour, Mr. Kersey Cooper, had employed a steamer for some years, and he might say very successfully. There was a vast deal of difference in cultivating the soil that Mr. Cooper occupied from that which their friends had been speaking about. As to the cost which Mr. Manfield had quoted some years ago,

he believed it to be pretty correct. The steam cultivator when at work went at the rate of about four miles per hour. He had walked by the side of one several times, and he could assure them he had considerably difficulty in keeping up with it. He believed steam cultivation to be really very successful, but he advocated keeping the engine to do other kinds of work as well. He believed farmers would derive the greatest benefit from the use of the steam plough, but it must be on strong deep clay soils. He had asked Mr. G. H. Nunn, at the Club dinner they sometimes had at the Angel, at Bury, whether he ever found any difference in a porous kind of soil, and he always said he could never tell the difference. There was only one season of the year that they could get land well cultivated, and that was directly after harvest. His impression was that it was of more service to the light land farmer than it was to the heavy. But he believed that on an occupation like that of his friend Mr. Cooper, it would be a great benefit if the engine could be used for thrashing and other purposes afterwards.

The CHAIRMAN had heard Mr. Booty had tried it on light land two years ago; he should like to know how it had answered.

Mr. BOOTY said as far as he had seen it had not answered at all. It was a loose soil and it had brought the stones up, and his men told him it did not plough now so well as it used to do.

Colonel WILSON said he spoke with some diffidence on the subject, but at the same time he was as a steward present at the Royal Society's Show at Wolverhampton and saw the cultivation for a fortnight during the trials that were going on, and he might say that he knew something of its working. It had been said that they ought not to work the steam cultivator on heavy land in wet weather. He could bear that out most decidedly. Two years ago he applied to Mr. George Matthews to go to him directly after harvest and do some work. Unfortunately, however, the gentlemen at Lavenham beguiled him into that neighbourhood, and he was there for several months, so that he did not go to him (the speaker) till November, and then there being a lot of wet it did him quite as much, and he thought he might say more harm than it did good. Speaking abstractedly, there could be no doubt that Fowler's double engine system was the best for breaking up the land, but they must have plenty of work. He would not use them for anything else, but they wanted farm after farm to go on to keep them at work. The outlay first was very great, but the question was whether they could make them pay. It had been thought that the roundabout system was the best, but at Wolverhampton it had been decided not to be the best. The work done by Fowler's system was excellent and by far the best. Then there was the question of cost. He knew something about that, and he must say he did not think it could be done very deep for 25s. per acre. He thought they must be prepared to pay 30s. if they wanted it done. It had been said they could not get it into the neighbourhood. He should advise them to adopt the system, and if they were in the neighbourhood, let Mr. Matthews know as much as they could in time where they wanted him to go. Don't let it go away from the place, let him work at home. If it could be shown that the district would pay, they would soon have other people taking it up. One great item was in the working expenses, in wear-and-tear; the ropes cost the best part of £100. In answer to a question, the speaker said that Lord Vernon's prize at Wolverhampton was given to apparatus, the whole cost of which should not exceed £700.

Mr. STURGEON asked if the £700 apparatus would do the land twelve inches deep?

Col. WILSON said he should think it would.

Mr. STURGEON said he should be afraid it would not do stiff land that depth. If so, about two or three farmers might have one of them.

Col. WILSON said perhaps he ought to say that the apparatus was tried simply for the prize which was then presented. It was only got up for that one trial and not so much for wear and tear. He had some conversation with Mr. Fowler and his men about it afterwards, and he suggested that supposing he were to order a set of apparatus, whether they would recommend him to confine himself to the £700, or whether it would be better to go a little further. Mr. Fowler said he should advise him to go a little further, and have a more powerful engine and superior ropes. There was a great difference in the ropes. The inferior rope cost about half as much as the superior, but the superior rope was much the cheapest in

the long run. But that £700 apparatus would not be what Mr. Fowler would recommend for work from year to year. They would probably advise a man to spend £800 instead of £700. The engines were often worked far beyond their nominal power. For instance, a 20-horse power engine which he saw at Wolverhampton was worked up to 130-horse power. It was tested by the engineers and found to be so.

The CHAIRMAN was pleased to find that Colonel Wilson was in the latter part of his remarks something like a certain postscript which contained the gist of the whole matter. The probability was that if a farmer wanted one of the cultivators, he would have to lay out about £1,000 instead of £700. After all, he thought it was a question of "will it pay?" He thought that was a matter for their consideration. There was no doubt that it was very good on certain lands, and on heavy it was pretty well settled, but the light land farmers thought they could get on very well without it at present. But they would be very glad to have it. He didn't see at present that there was any chance of their becoming like his friend Mr. Sturgeon, who had some special kind of land to work on. He should like to ask him how many years it would stand after the first ploughing—how often did it require to be done?

Mr. STURGEON said about once in four years.

The CHAIRMAN said if they could get the machine once, if it cost them 30s. per acre it was not a very great deal after all, for they must remember that that extended over four years, and they could divide it by four—that he thought was a great consideration for them. He did not believe that even with the expenditure so high as it was it would fail to remunerate them if they would go in well for it. One thing in Mr. Greene's paper he should like to touch upon. It was stated that if the system was tried on light land in a droughty season the land would last longer and suffer less from drought than if ploughed by horses. That was a very great advantage to a light-land farmer, and a good reason why he should use the engine. The advantage of it was that they got rid of their water. He maintained that if these engines were used they made an improvement not only in the cultivation of the soil but also in the staple value of it, and he thought that was in a great measure a question for the landlord. All these questions were something beyond the common tenant's covenants, but he thought that if the tenant had spent a sum of money in such things the landlord should take that into consideration. If steam cultivation was carried on to a great extent he thought that when the tenant went out the land ought to be taken at a valuation. They were really improving the staple value of the soil as well as the cultivation. He thought they must all agree that steam cultivation, if they could only get it, was a very good thing.

The VICE-CHAIRMAN contended that it was almost impossible for steam cultivation to be applied successfully to light lands, and said he spoke feelingly. On a light land farm there was the greatest difficulty in finding the water to supply the engines. If they persisted in cultivating their light land farms, they would find, probably, that instead of doing good they were doing harm. He maintained that the treading of horses was a great benefit to light land. It would bring solidity to the soil. They found frequently that on the headlands the crops were better than on the rest of the fields. He believed that horses were more benefit to them on light land than they were given credit for.

Col. WILSON said, with regard to the question of the cost of steam cultivators, he had originally put Mr. Fowler's apparatus, which he saw, at £700, and the chairman said it would probably cost £1,000. He did not think it would cost so much as that. He would put it at £850. He spoke of Fowler's system as being greatly superior to the roundabout system, which required a greater length of rope and was of a greater wear and tear.

Mr. STURGEON spoke of the strength of the apparatus of the roundabout system, and said they had no place to fasten the rope. He fastened it to some trees and other different things, but it pulled them down. They could not get on at all on his land.

Mr. GAYFORD said, if Mr. Sturgeon was troubled with a lot of old pollards, it would be the very best system.

Mr. STURGEON said he did not mind that, but they could not get on with the work.

Mr. HARRISON said he had only tried nine or ten acres in all. He quite agreed with what Col. Wilson had said, and also

with what had been said by Mr. Manfield and Mr. Peto. He should very much question whether it was of much advantage on light land. He thought there could not be two opinions about that. He had drained some land over twice, and so that now he had no such thing as a furrow upon it. Before they cultivated by steam they must lay the land dry. He believed with the chairman that there was something in what he said about the cost of 30s. per acre being spread over four years. He should be pleased to have 100 acres done at 30s. per acre if it were done well. Another important point was that it was a landlords' question as well as a tenants'. There were many excellent landlords, they were happy to say, and there were also those who would take every advantage of the good cultivation, and when the tenant had laid out a large amount of capital as a tenant farmer upon his occupation, his rent was considerably raised, or he had to leave, which he pleased. He maintained that if the rents of the tenants were to be increased from 40 to 50 per cent. in consequence of what they might have done, the sooner steam cultivation was done with the better. It was all very well for landlords and farmers who were farming their own occupations, but until there was a more satisfactory arrangement between landlord and tenant, he thought it was not very wise or prudent to lay out very much money on the land. There were many men at the present day who wanted a lease. He did not care a snap of the finger for them himself. His opinion was that if a system were adopted whereby whatever improvements might have been effected might be taken by a fair valuation, it would be far better than the present system of lease. Supposing a landlord introduced a tenant on his estate, and he might take a farm for a term of ten fifteen, or it might be as some did for twenty years, if that tenant should prove obnoxious to the landlord, in any sense of the word, it must be very annoying to a gentleman to have a man on his estate whom he could not meet with any degree of pleasure.

Mr. MILLER said he had done a little in the way of steam cultivation. He thought there was a great loss of power in the roundabout system. It was equal to the continued labour of three horses to pull the rope round the field, thus showing that much of the strength was lost. It was equal to four-horse power to carry the rope round a field of forty rods long. He had employed Mr. Matthews with his double engine to do about thirteen acres for him, and he was perfectly well satisfied with it. He thought the direct system was decidedly better than the roundabout. With regard to the cost, 30s. per acre, he must say that he was of opinion that he had never laid out money better. He believed Mr. Manfield preferred July as the best time of the year to do the work, but he did not agree with that. He would rather agree with Mr. Sturgeon, who thought September, when the crops were just off, the most advantageous time to apply it. He mentioned having a piece of tenacious stiff soil; the field had holes in it. He had to dig some water furrows to take off the water in the middle, and notwithstanding that it had been well drained, a large quantity of water ran into those furrows. Since he had applied the steam cultivator he had not seen a drop of water run off at all. He thought the advantage of that was very evident. It afforded a facility of escape for the water, and the soil was laid dry to a considerable depth. Mr. Miller further stated that he had put barley on this land without any artificial manure and he had got ten coombs per acre of good quality, and he did not think that he had any reason to complain of that. Last year he put beans on, and he had a good stout crop, but beans were stout everywhere last year, so he could not consider that much of a criterion. Next year he intended to plant wheat, and he anticipated that it would answer well. If he was a large farmer he should have a set of Fowler's apparatus of his own. The great difficulty was that they could not have it when they wanted it.

Mr. W. G. HATTEN said he thought that they ought not to compare the results of steam cultivation on light land with the results on heavy land. On heavy land the object was to cultivate it deeply in order to enable the water to penetrate through the soil into the drains, and also to let air into the soil. He wanted to see draining done by steam. The men had complained of the hardness of the lower spit, and now they complained about the upper one. He wanted to have an eight-horse power engine so simplified that it would do every kind of work that he wanted to do on a farm. He wanted to have it cultivate and also drain the land, and ultimately to lay

the pipes in by steam; he thought that might be done. There seemed to him to be a great loss of power which he could not understand. He hoped the thing would be drawn out by some practical engineer. If they were obliged to get a 12-horse power engine on their farms, there was a great deal more than they required for cutting chaff and similar things. They wanted an eight-horse power engine to do everything on the farm.

Mr. GAYFORD said he was debarred by circumstances and neighbourhood from using the steam cultivator in any way. It was a hard matter for him sometimes to find water for stock, much less a steam-engine. He had several times tried a mode of putting one plough behind the another, but he had never seen much benefit derived from it on light land. Then there was the difficulty of getting the engines when they were wanted. If they could not do that he did not see that it would pay them. Gentlemen who farmed better land could, of course, afford to pay better for it than they could on their light lands. They were much indebted to their worthy President for the paper which had been introduced. The subject was one of importance to them, and he agreed with Mr. Hatten that the day would come when steam cultivation would be so simplified that it would be brought within the means of all, and would be more beneficially applied than it could be at present.

Colonel WILSON said with regard to the suggestion thrown out as to the probable reduction of the expenditure in connection with steam cultivation, the thing was most severely tested by the Royal Agricultural Society of Wolverhampton, for Lord Vernon's prize was given with the object of bringing down the cost as much as possible. He was afraid there was no prospect of getting it down cheaper than it was at present. Mr. HARRISON had raised an objection to a tenant farmer introducing steam cultivation, on account of the supposed want of confidence between tenant and landlord. He thought there was not so much of that want of confidence as Mr. HARRISON seemed to think. His tenants were at perfect liberty to do as they chose; they could have a lease or not, as they pleased.

Mr. HARRISON maintained that, although there were some very excellent landlords, yet there were others who were ready and willing to take every advantage which it laid in their power to do.

Mr. HATTEN was happy to think that Mr. HARRISON's landlord was not a local gentleman. The landlords in that locality were quite different to what was spoken of by Mr. HARRISON.

Mr. HARRISON thought Mr. Hatten was rather personal in his remarks.

Mr. GAYFORD supported Mr. Hatten's observations. They did not mean to allow it to go forth to the public that they had such a bad opinion of the landlords of West Suffolk as that which Mr. HARRISON had mentioned. He should be very sorry to think that such a statement should go forth sanctioned by the members of that Club.

The VICE-CHAIRMAN bore out Mr. Gayford's remarks. He thought every tenant was in his own hands. He pretty well knew the character of the landlord under whom he was going to take his farm, and if it happened that he ran his head into anything which he afterwards did not like, he (Mr. Peto) thought he deserved all he got. He should be very sorry that such a report should be circulated concerning the landlords of that neighbourhood, and more especially as emanating from the Ixworth Farmers' Club.

Mr. MANFIELD, in reply, was pleased, he said, at the very practical turn which the discussion had taken. The whole thing seemed to resolve itself into a question of "will it pay?" His opinion was that it would pay. He might say that he knew it would pay. He hoped the time was not far distant when they would have more steam cultivators in the neighbourhood. He thought they ought not to forget, but perhaps some gentlemen did not know, how much they were indebted to Colonel Wilson for the one which they now had in the neighbourhood. With regard to the time of year at which it should be used, he thought it might be used at any time when the land was dry. He had no water furrows where the steam cultivator had been. With regard to what Mr. Hatten said, there were steam draining machines, but it was, he believed, impossible to get a steam cultivating engine to do steam draining. There must be extra appliances, and there must be a windlass. He was afraid Mr. Hatten wanted an impossibility.

Votes of thanks were passed to the Chairman, to Mr. E. Greene, M.P., and to Mr. Manfield.

STOWMARKET FARMERS' CLUB.

SUFFOLK HORSES.

At the last meeting the subject for discussion was The Breeding of the Agricultural Horse, introduced by Mr. T. Lingwood, of Brockford. The chair was taken by the Rev. Henry Hill.

Mr. T. LINGWOOD said: A paper on the cart-horse having already come before the Club in the one kindly given by Mr. Henry Cross, allow me to say that although that paper dealt with form so fully, there yet appeared ample room for one on the breeding of the cart horse—a branch in the department of farming which seems to me much neglected; for with bullocks, sheep, and pigs some regard is paid to the sort kept or bred. There are certain laws which govern the principles of breeding which, when followed up and persevered in, raise the standard of animals so bred. A disregard of those laws lowers the grade in a like degree, however pure bred the originals that were commenced with. Now, if I advocated nothing but the purchase of long-priced, good brood mares as a start in breeding, tenant farmers present with stiff, heavy land to work would, I know, send forth their objections thick and quick, it being a much more hazardous undertaking to breed colts on heavy than on light land; still, that course pursued, matching the mares with equally worthy sires, effects not only a saving in years, but establishes a fixed type far more certain to produce good things, than commencing with inferior mares, however carefully and judiciously breeders may continue to pair the sexes. If I look the facts in the face, I find that the plan generally adopted is to obtain the services of one stallion for the several mares had in contemplation for breeding. Now that apparent cut-short, toss-penny move won't bear inspection; for where the mare was a-nick with the

horse, a promising foal is begotten, whereas those mares of an unsuited stamp produce ordinary foals. Food consumed in the rearing of the latter had far better be expended in rearing neat stock, and, as a farmer must have horses, buy yearling colts, which in their turn shall fill up coming gaps in the stables. By way of illustration, I will suppose six mares diverse in make; the 1st, a long, low, wide-spread mare; No. 2, a short-made, leggy mare; No. 3, a fair-proportioned, long, light-legged one; No. 4, a short, punchy one; No. 5, a long mare, with fine hind-quarters, but narrow-chested; No. 6, a stylish one with substance, good form and size. Now it is a fact that, however good in points and general contour a horse may be, not one can be found suited to such a lot; but I have taken extreme cases for example sake. No. 1, a long, low, wide mare, is so constructed that Nature has furnished her with a capacity and powers for the development of a large offspring. An over-sized horse in comparison to her—and should he be a trifle leggy—would cross well with her, provided defective points in her were met with good points in him. No. 2, a short-made, leggy mare, is just the sort, with a crested neck so often spoken of, as a good mare to breed by. Observant eyes will have noticed in a flock how frequently a long, low-made ewe produces large twins. When the ewe, formed in the trunk like this mare, has but a puny lamb, it is so with mares where there is no length of back or ends—there is no room for the growth of the fetus. Thus disappointment ensues. There is danger also from the projecting sides, a lengthy mare carrying her young closer and safer. No. 3, a long, light-made mare, needs a punchy horse with long back ribs, for if short the progeny will be too high and long—a regular rail, as we some-

times hear. A colt, as a two-year-old, should have length, and if let down at the flank grows downwards into a valuable horse. No. 4, a small punchy sort is the stamp which many suppose requires a high slashing horse, but such crossing proves almost always a failure, the reason of which is this, the deposit of the male is too much for the fructifying powers of the female to carry out. No. 5, a lengthy big mare, with fair hind-quarters but narrow chested. I had often wondered that mares of this stamp paired with an undersized stallion should throw a colt with a full, open chest. Cline's excellent paper on form asserts why: "To obtain animals with large lungs, crossing is the most expeditious method; putting well-formed females from a variety of a large size to a male of a variety which is smaller. By such crossing the lungs and heart become proportionately larger, in consequence of a peculiarity in the circulation of the fetus, which causes a larger portion of the blood under such circumstances to be distributed to the lungs than to the other parts of the body; and as the shape and size of the chest depend upon that of the lungs, hence arises the remarkably large chest which is produced by crossing by females that are larger than the males." In No. 6, a stylish, compact, weighty mare, with size, I may say that the man who breeds and retains such a stamp, needs little paper space. He would know how to remedy defects by giving her a horse good in his points where she was weak; but a favourite mare frequently gets her generative organs damaged by becoming too fat; a mare in fair condition being more healthy and likely to stint. I have mentioned an over-sized and an under-sized horse in comparison to the mare. As an index, I should say for the horse to be on a par with the mare he should stand three-quarters of a hand higher, proportioned accordingly. The more sorry a lot of mares are the less occasion there is to use a variety of stallions. It is the lack of distinctness of character in a stable that calls for sorting. To show to what a length the late Mr. Blenkiron went in selection, I find in his sale of the Middle Park yearling blood colts last June, where 40 were sold for £15,000, no less than 15 blood sires were employed. In his case it was strains of blood which influenced him in a great measure. Seek to avoid hereditary diseases in the parents, viz., blindness, broken wind, spavins, eurls, ringbones, side-bones, grease, farcy, &c. I would also warn you discard a mare which approaches being hatchet-headed, pig-necked, roach-backed, or goose-rumped, eat-hammed, very cross-ankled, or pigeon-toed; such shapes being too far gone to ever hope to remedy the glaring defects which doubtless have been produced by something worse than careless breeding. One thing amongst others which has urged me to recite the foregoing examples, has been to show the principles adopted to grow big things, as the breeder's aim ought to be to meet the requirements of the day; for with double-furrow ploughs fast coming into use, horse-engines requiring speed, good-sized horses for town-work requiring size, not at the expense of activity, compactness, and quality, ought to be kept in view. I would further add, that in pairing a lengthy mare with an undersized but compact horse in comparison to her, in the produce will be seen, in the one crossing, the lengthy proportions of bone combined with the stoutness of the other; but to enlarge the size, not losing sight of compactness—in starting with a short mare, it will take something like three crossings of gradually lengthened sires to bring that about. The male distinctly influences the form of the offspring in draught-horses, but the higher in the equine race the more the mare seems to reverse that order. This accounts for the Arab valuing far more highly the breeding form of the dam than he does the sire for stud purposes. But as the gait or "go" of the youngster is inherited from its mother, this may somewhat be accounted for. In selecting a stallion for a mare, the breeder's first start should be to become familiar with her defects in conformation, and also her good points, and then working up to a given model, had in view, seek to overcome defects by extra good points in the horse, but avoid extremes, or you will be foiled; rather take two crossings than too long a stride at once. Where the breeder gets into the fix of having two stallions of similar type, give the preference to the one whose pedigree stands the higher. I will acknowledge that what I call a jump in the dark may be taken, thus, either a difficulty in arriving at a knowledge of the parent's descent, or a false one may be given, and so damage the breeder's best-constructed plans; surely here it is that a stud-book would be of some

service in tracing strains, and not only so, but it would be a tribute of respect justly due to the painstaking individuals who have carefully cultivated the better families brought down to our time. That the colour of the male in animals predominates in the offspring there can be little doubt; but with the Suffolk horse, in which some five different tinges of the chestnut colour prevail, viz., dark chestnut, dark red, bright chestnut, silver-beamed, and light chestnut, it need not be wondered at that a horse having various tinges in his escutcheon should occasionally throw a paler or darker shade than himself in colour, that tending to a dark should indicate hardihood, the pale or light chestnut fostering grease. In selecting suitable sires shirk not a little trouble, be not turned aside from so doing by the present saving of a sovereign or so, or because the horse's owner happens to be first or thirty-second cousin to you. I am persuaded that real help in improving our horses would arise from an established spring show of stallions. What a Bismarck's way of doing business Bakewell's was! One of the rules of the Disley Society forbade any member from showing rams, only to members of that Society, on certain fixed days, before showing the rams to non-members. The beneficial results of this were (for it was like playing the cards into one's own hands) that the most useful rams were reserved for the Society's special use. Fortunately for us the stallion owner cares not to reserve the exclusive right to the horse's services, although in the show field this often militates against him. As a very successful breeder and exhibitor put it, it was a comparatively easy thing to take first honours, but to maintain that position was not so easy, descendants of his own horses coming out to do battle against him. I said established, I should have said re-established spring shows, for I find in an old county chronicle, bearing the date of 1790, a report of Woodbridge April Show of Entire Horses, and Mr. James Read, of Laxfield, tells me that 50 years ago he remembered Mr. Julian—who was a Catlin in his day—showing for horses at the same place in that day's fashionable but unsightly style, being bung-tailed. Thanks to some Woodbridge people, who have the place and the will, we look again like having a show established. The obesity of the horse is often objected to, the objectors stating as their ground for it, that it damages their procreative powers. There is a vast deal depending on a horse dealer's judgment and experience. It is the overloading a coal with fat which does the mischief, for just as the overtaxed two-year-olds on the turf fly in their legs, and beget impaired stock when used in the stud, so overdone colts from early service go at the hocks, and frequently reproduce in their stock the bad effects; but two-year-olds being less used of late, hocks certainly look cleaner. Two and three-year-olds are nothing like so sure as older horses for service. As to a weekly or nine days' round, the latter has its objections from a difficulty of catching a mare in season; but a week is often not long enough for previous symptoms to have passed off even should the mare be safe, being more successful that way, many prefer the longer stage. An even temperature, moderately warm, favours conception; for as with a flock, (though ewes may be in good trim, and rams well caked or corn fed, it is the addition of a dry tugging time that is followed by a heavy fall of lambs. The month of May has always been spoken of by old heads as the season for the mare going on kindly. The change then to green food may be an assistance, but more regulated atmosphere does very much too. At the time of covering, and a few days after, it is well not to have the mare over heated, Nature having ordained that time be given ere the seed becomes rooted in the yolk. Sterility in the cow may often be overcome by fasting her some hours after conception, but I have never found the same treatment avail with a mare; bleeding, or cold water applications seem to me alike useless. When a mare is discovered slipping her foal, where other in-foal mares are, have her off at once to the sick house—sympathy in ewes is bad enough that way, in mares it is worse. The farmer of good working soil has an advantage over the heavy land farmer in breeding, for how often it is that on the latter we are kept days, and sometimes weeks, off the land by the wet. Then, when the mare next goes to the plough—she may have been kept at light work—the heavy work so tells upon her that a loss of the embryo takes place. The common practice of putting two-year-olds to work tends to dwarf and pull out of shape many a once promising colt. From these causes it is, we find, that a large

majority of the exhibitors in the agricultural horse classes at our shows are light-land men. That which helps to forward colts nicely is to give the foal when quite young a but or two daily of crushed oats and bran—away from the mare. That as the young one ages, the mare may be worked more frequently. This plan is so helpful at weaning time, as hardly any loss of milk fat takes place. A penny packet of condiment given daily through the first winter sends the colt on well. My difficulty was in taking the condiment off without loss of condition. I manage that by giving a few split peas at the time of turning out to grass. This is something after the manner of the rearers of the large varieties of fowls for show purposes, who, to increase the size, mix certain ingredients with their food to gain that end. In having brought this subject before the Club, I remember I am fostering "the cart-horse eye taste," so objected to by occasional outsiders, who all go for something in the hunter or hackney style. My defence is, when a carefully selected stud of sound stout thoroughbreds is set for the sole purpose of getting such sorts, what a telling temptation it will be for some of us, providing we have a chance, to try a clip or two that way.

Mr. HENRY CROSSE said he could not say much about breeding as he had not bred a cart horse for twenty years, and never had bred many. He had some from his father, but had not bred many himself. As to the particular style of breeding, or the particular stock, that was all a matter of taste. The reason why they had to complain of the Suffolk stock at present was that so many of the best of the Suffolk stock had been sold out of the country. To all appearance, with the present generation of Suffolk farmers, the stock of Suffolk cart horses had very much deteriorated, and, therefore, he thought that Mr. Lingwood's paper might generally be taken notice of by those who intended to breed. He never pretended to be a breeder himself; he did not pretend to have an opinion upon breeding. His business had been to judge horses after they were bred, and not to say how they should be bred.

Mr. E. LINGWOOD said he thought Mr. Crosse must have forgotten the Dennington sale when he spoke of the deterioration of Suffolk horses. There, six mares made 1,200 guineas, and, at any rate, he should not mind such deterioration as that. It could not be a very serious deterioration when six mares made so much money as that. He thought there was one thing which they ought to be a little careful about, and that was in showing horses—as hunters and hackneys now were shown—in harness. He recollected saying to a man who showed a horse in that way, "You must have a very nice horse for hunting, for no one can ride him." The owner said, "Hold your tongue; you will spoil the sale of my horse"—that horse having taken the prize as a hunter. He wished to see horses have prizes for the work they were intended for, and teams should be put to draw loads, and if they would not draw well they ought not to have the prizes. One of the best shaped mares he ever had never would pull when the engine got into a bad place more than once.

Mr. CROSSE: It is very easy to see why she would not pull more than once: the moment you set her to pull she pulled upon her pipe, and she could not draw more than once. That is the fault of the shoulders in many cases.

Mr. NOBLE said he had never taken a prize, but his late father had, but he had neglected that part of the business. He must agree with Mr. Crosse, that the Suffolk horses had deteriorated, for they were constantly sending horses out of the country, and he should suppose they sent the best, or those which made the most money. Mention had been made of the large amounts realised at the Dennington sale, but perhaps the name had something to do with that, for he had a mare that had taken the prize away from the mare that made 300 guineas at the Dennington sale, and yet did not suppose he could make half that money of her.

Mr. J. HEWITT said he should like to ask a question, and it was this: Is our pure-bred Suffolk cart horse the best adapted to agricultural purposes? He had seen a good team of half-bred horses in his yard from Mr. Stearn Scott's—a very beautiful team. They appeared to him to be half-bred.

Mr. C. S. SCOTT: They are not half-bred; they are cross-bred.

Mr. HEWITT: Well, at any rate, they are not pure-bred Suffolks, but they seem to be very useful.

Mr. STEARN SCOTT said the horses Mr. Hewitt alluded to were cross-bred, and they were better at work than the Suffolk,

and stood the road better. He did not understand Mr. Crosse's saying that the Suffolks were deteriorating. It was their own fault if they did.

Mr. CROSSE: Aye, aye; that is very likely.

Mr. S. SCOTT said if the good horses went out of the country, and so caused a deterioration of those left behind, why did not they club together, or stick together, to keep the best horses in the country? Or, why did they not keep the best of the brood mares? Let a good horse stand always at one place.

The CHAIRMAN: Say, at Stowmarket.

Mr. S. SCOTT: I don't care where he may stand, but don't let all the good horses go out of the country. Mr. Scott said he should be happy to subscribe to have a good horse kept in the country, or to meet the owner in some way so as to make it answer his purpose to keep him in the country—that was, where they had allowed the stock of Suffolk horses to go down. As to the horses Mr. Hewitt had called half-bred—

Mr. HEWITT: I don't mean half-bred, but cross-bred.

Mr. S. SCOTT: I believe they are better draught horses, and stand the roads better.

The SECRETARY: How are they crossed?

Mr. S. SCOTT: I can hardly tell you, but I think they are between the Cambridgeshire and the Suffolk.

Mr. HENRY CROSSE said they must remember that when he said the Suffolk horses had deteriorated, he said the reason why—by the sending of the best animals out of the country, whether horses or mares. The late Mr. Crisp used to sell not less than ten horses (the best he could find in the country) out every year. He sold them to go abroad, and if he sold mares as well as horses, that was a good reason why the best horses should have gone, and why the Suffolk stock should have deteriorated. They were glad to farm to make a profit, and all should farm to make a profit, and they could not make a profit by breeding so well as they could when there was more pasture. That was one great reason why there was such a deterioration in the heavy land districts: the best were sold off, and a smaller number kept, because of the want of pasture. There was not much attention paid to breeding in many places, for, if a horse had but four legs, and a head and tail, it would sell, as he had seen, the week before, at Lavenham. There might be a larger quantity of bays amongst the Suffolks than formerly, and one reason why the bays were so much better than the chestnuts was that the chestnuts had been favourites with the foreigners, and they had gone first, and the bays had been left in the country, and the best had also been left with the others. There were now many bay teams in that neighbourhood, and the best he had seen in Stowmarket were Mr. Lambert's, and occasionally some from Mr. King's, of Preston. He rather liked to see them, and though he did not pretend to know anything about breeding, he contended that the bays that came into that town were certainly better than the chestnuts.

Mr. C. W. SUTTON said the subject of crossing breeds having been started, he wished to ask a question, for the sake of discussion, whether a cross with such a horse as Honest Tom would not be of advantage to our Suffolk mares? Honest Tom had a large bone below the knee, and that seemed to be a point in which the Suffolk mares were deficient.

Mr. J. E. CHAPMAN said he thought the putting a Shire horse like Honest Tom on Suffolk mares would not be the right way to cross. The best way would be to use Suffolk stallions on Cambridgeshire mares. They wanted the biggest size in the dam, he thought. He did not know what Mr. Lingwood would say to that.

Mr. C. W. SUTTON said he thought there could be no two opinions as to the principle Mr. Chapman had advocated, that the mare should be the largest sized. But what were they to do? They could not have the Cambridgeshire mares crossed, or they must entirely alter the breed.

Mr. J. E. CHAPMAN said if they used the Cambridgeshire horses on Suffolk mares they would not get such good horses as they did now.

Mr. J. J. HATTEN said a word or two had been mentioned as to the age at which a colt ought to be put to work. He should like to know whether the breed had anything to do with the working. They had heard a word or two about jibbing, and also about the shoulders being in fault. He thought the men were in fault as well as the horses—it was in the management.

Mr. S. SCOTT asked at what age a mare ought to begin to breed? He knew they were often taken too young for that purpose, and that made them stick up their backs and put them out of shape.

The CHAIRMAN said that Mr. Sutton had asked a question about Honest Tom, but he would rather see Mr. Scott's horses subscribed for to be kept in the county, and especially to bring them to the country round Stowmarket. He had a partiality for that style of horse, and the difficulty he found was to find a horse which travelled long enough in the season to be of service to the neighbourhood. Mr. Crosse was of opinion that breeding of agricultural horses was best left alone; and for his (the Chairman's) part, he would rather breed what were called nag horses, though he did a little in the agricultural line when he could. He thought it was a misfortune to the Club that they had not Mr. Wilson, of Baylham, present, as he might have told them, perhaps, a little more than they knew. Then, again, as to pedigree, did any gentleman know whether the second high-priced mare at the Dennington sale had a pedigree as long as that matchless mare, Matchet? There were other questions which might be asked, and one was, whether the produce should be sold as sucklings at Woolpit fair, or kept a little longer? He was greatly in favour of the Suffolk horses himself. Mr. Crosse had mentioned horses from Mr. King's, of Preston. Mr. King was a great lover of a Suffolk horse, and he (the Chairman) could tell them that his horses could trot as well as most teams. As to the deterioration of the Suffolk breed, the best animals would sell the most readily, and fetch the most money, in Germany, or France, or in England, whether to work or to eat. The difficulty of settling which was the best breed was very great. Some gentlemen in the room preferred the cross-bred horses—between Yorkshire and Cambridgeshire and the Suffolk, or what was called the London van horses; others would very likely prefer the Suffolk pure chesnuts. As to which was the best was, he supposed, a question which would be left undecided till there was not another Suffolk stallion in the county.

Mr. S. SCOTT said another reason why they should have a horse amongst themselves was that they were now dependent upon what he called the show horses. They were put upon what was called a nine days' round, and very soon you heard, "I am going to Wolverhampton, and cannot stop to supply you." He had three mares to one horse last year (he would not mention the name), but the horse was taken away to Wolverhampton, and he got no colt at all. That was not what they wanted. They wanted a horse to keep amongst them, and none of the show horses. If they were going to fat horses up for the shows, they would not get colts.

Mr. T. WOODWARD said he quite agreed with some of the remarks which had fallen from Mr. Scott with regard to keeping a horse in the neighbourhood. There was an old saying that in every parish there should be a good entire horse, a good boar, and a good bull. If they had those things, undoubtedly the breed of horses might be greatly improved—at any rate, they would be more likely to ensure a safe progeny. It was a well-known fact that those horses that were fattened so very lightly very seldom left much stock behind them. Cupbearer was in instance. He had given that horse six mares, and he had failed in every instance but one, and that day he had heard that there was one Cupbearer colt. There was one thing that must be clear to their minds, and that was that they as heavy-land farmers must have stronger horses than were needed in a light land district. They must have strength, they must have size, they must have good mares, and certainly they must have sires equally good. Mr. Lingwood's first mare—a long, low, wide-spread mare—surely was such a one that they must keep amongst themselves, and as to her being picked up by the foreigner, his advice would be to the farmer to stick to her himself to breed from. Then again as to the short leggy mare, he (Mr. Woodward) was not in favour of short mares, and he was dead against leggy ones. Then the long, light mare—here again they were not equal to the work in Suffolk. The short punchy ones he was much obliged to Mr. Lingwood for introducing. What constitution could be better than that of a short punchy mare? Then the long, narrow-chested mare, could they have strength with such a one? He thought not. He had no doubt that their mares were not so good as they ought to be, and at any rate they were not carefully put to the horse best calculated for

them. Take the best horse they might, and if they put him to a narrow, thin chested mare, she could not throw out a colt with long springy ribs. He thought it of the utmost importance to have long, deep ribs springing well from the centre. As to the deterioration of their horses, he would like to ask how that was to be remedied? No doubt Suffolk people had worked the Suffolk horses long enough to know that they suited them better than any other breed. He was bound to say that the Suffolk horses seemed suited to the heavy-land work in Suffolk better than any other breed. He had crossed the Lincolnshire with the Suffolk horses, and the great difficulty he had found had been to keep them free from grease. The hairy-legged breeds were more frequently greasy than Suffolks, unless they were well taken care of. He therefore thought they must still stick to the Suffolk if possible, but he admitted that they were not favourites in other counties. In no other county scarcely would they see a team of Suffolks. In Kent they had a grey horse; in Lincolnshire a long-legged and short-ribbed breed, and that was, in his opinion, the great fault of the Lincolnshire breed. They might be wide-spread and have more bone below the knee; but as he had said before, they were more likely to throw out grease than the Suffolks. In Norfolk they had lighter land, and there they could use a light-legged, active, quick-moving horse much quicker than the Suffolks. Mr. Lingwood instanced the putting of six mares to one horse, but the reason for that in many cases was that they were forced, because so few horses came into the neighbourhood. If they could introduce a system of having one horse for each parish, they would improve the breed generally, and would get more colts. There could be no question that at the present price of agricultural horse-stock that was desirable. He admitted that colts were put to work too early, and that one reason why they did not rear more was that the pastures had been broken up. It was only in places where there were marshes to turn them on, that horses could be bred in any numbers. The chairman had asked if it was profitable to sell foals at Woolpit Fair. He (Mr. Woodward) thought a man should buy foals, though an old saying was—

"A man that buys foals
Should find money in holes."

At the same time by buying a foal off her mother, he had a chance of seeing what she was, and if she had had anything like a fair sire they could tell what the foal would be likely to be. Undoubtedly buying at a year old was cheaper; they would come to less money, but they could not so well tell what they were to be. If the Suffolks had deteriorated, he thought it was in a great measure from the practice of breeding in-and-in so much. If they wanted to introduce wide-spread mares of a good breed where were they to get them? He had stated his objections to the Lincolnshire breed, and perhaps some gentlemen would tell them where to get mares with deep ribs, wide-spread and short legs.

Mr. C. W. SURTON said, as a Lincolnshire man, he was probably rather prejudiced in favour of the Lincolnshire breed. Mr. Woodward had said that he should have liked to cross the Suffolk cart-horse with the Lincolnshire mares, provided the produce of the cross were not subject to grease. This was attributed to the great hairiness of the legs, and to the washing them in water, so that they did not dry properly. He (Mr. Sutton) would contend that the hairy-legged Lincolnshire horse was no more liable to grease than the Suffolk cart-horse—for this reason, the hair on the legs protected the legs from the action of the cold, which stopped the pores of the skin and produced grease. But those horses would not stand being driven through a pond as soon as they came from work, and to be allowed to get dry in the stable. He contended that the Lincolnshire cart-horse was as free from grease as the Suffolks—if not freer. As to buying foals, he thought a gentleman buying a foal should make it a *sine quâ non* that he saw the mare that produced the foal. It was too generally the case that people would make use of mares some with side-bone, some blind, and some spavined; but if he bought off the mare at Woolpit, or some such place, he would have some opportunity of judging for himself.

Mr. W. S. GRIMWADE said that, with a very few exceptions, he could endorse what Mr. Woodward had said. He thought he had taken a very comprehensive view of the subject. Mr. Lingwood and other speakers had not touched upon the suc-

cessful management of a mare during the period of gestation. That appeared to him (Mr. Grimwade) to be well fitted for discussion, and of equal importance with the question, when a mare should begin to breed. As to the treatment during gestation, he thought the mare should be allowed periods of rest till September; and no doubt there was great risk in putting her to work on heavy land, and that was the cause of the want of success with heavy-land farmers. He thought the management of the mare both before and after foaling would be an interesting subject for discussion.

Mr. E. LINGWOOD said as Cupbearer had been mentioned as having no stock, he would say that he had used the horse, and had foals in both instances. In one the mare lost the foal, and in the other she died. His brother Thomas had also used the same horse. He (Mr. E. Lingwood) wished to challenge the statement that Cupbearer did not leave stock behind him.

Mr. LINGWOOD, in reply, said if it were a fact that Suffolk horses were deteriorating, it was time that they looked to their laurels. Mr. Woodward mentioned light mares, and Mr. Lingwood remarked that it was his aim in his paper to speak of them also, because long light mares were more generally liked in the locality of Stowmarket. But it seemed to him time to use compact horses. Mr. Scott mentioned about the

keeping a horse in the country, and that thought had struck him (Mr. Lingwood); also, whether it would not be advisable for the members of the Club to unite, and thus draw a horse into their locality more suited to their mares. There was an allusion made to the Lincolnshire horses, and on one occasion he asked a friend of his (a brewer), who was very fond of horses, what sort he liked. He replied that he had tried all sorts, and that he had come to the conclusion that Suffolk horses were the best; they would stand the road better than any other kind. Objection had been made to the show stations as being sometimes over fat; but he instanced Catlin's Duke, which had a most enormous quantity of mares, and yet, wherever he travelled, he left a large number of foals. He thought a great deal depended upon the management and experience of the horse leader. Allusion had been made to Cupbearer, and he (Mr. Lingwood) might have been more fortunate than others, as he had four foals out of five. As to buying foals at Woolpit Fair, he remarked that a man who had got a good foal would not very often sell it. In Prussia the Government allowed the farmers to have the horses at 7s. 6d. a mare. If the Government wanted to raise a certain class of horses, that was the right way to get them.

Votes of thanks to the lecturer and chairman concluded the proceedings.

THE HEXHAM FARMERS' CLUB.

FEEDING CATTLE.

At the February meeting, held in Hexham, Mr. C. G. Grey, president, in the chair, Mr. BRYDON, of Seaham Harbour, agent to Earl Vane, read the following paper:

The first point requiring settlement is whether cattle for feeding should be reared on the farm or bought in. Of course this, in a great measure, depends upon circumstances, but, where these are favourable, I should say, "Rear as many as you possibly can, and keep them improving in condition from the first." When dealt with in this manner they thrive better, arrive sooner at maturity, and are worth more per stone to the butcher than bought-in animals, which, as a rule, have been in low condition, and thus lost their calf flesh. Beasts of the latter description always feed slower, and, when they do come to the shambles, have a great deficiency of lean, compared with fat, which reduces the value of the beef. As the number of calves reared must, in a great measure, depend upon the quantity of milk available for this purpose, it is worth consideration whether the plan of putting a certain number of heifers to the bull every year is not worthy of more extensive adoption in this system. The calves suckle the dams during the first grass season, after which the latter are led off, and the former wintered for feeding the following season. I know of several farms where this plan is carried on with satisfactory results. When cattle are bought for feeding, well-bred animals, not too low in condition, should be selected, and, if their previous treatment can be ascertained, it is well to avoid those that have in any way been forced by artificial food. This is a rule of that eminent breeder and feeder, Mr. McCombie, of Tillyfour, and his long experience and universal success are strong points in its favour. Having obtained our supply of cattle either by rearing, purchasing, or both, the next question is, What are the best descriptions of buildings for fattening animals? Discussions on this subject have generally resulted in a verdict in favour of boxes, and justly so, as I believe no other building is so admirably adapted for the end in view than a properly constructed box. The cost, however, per head of stock accommodated is much greater than in any other description of building for feeding cattle—a circumstance which nearly always limits the number erected to a mere proportion of the number required. The question then arises, What building most nearly approaches to boxes in adaptation to the end in view, and, at the same time, can be erected at a moderate cost? And here I unhesitatingly decide in favour of covered yards. A good deal may be said in favour of stalls, but I consider them as much inferior to covered yards as the latter are inferior to boxes. I am here,

it must be borne in mind, speaking of the use of stalls for feeding cattle, not for cows, the latter being foreign to the subject of the present paper. Properly constructed covered yards lack few of the advantages of boxes, and I know of no building in which animals will thrive better. The manure, not being washed by the rains, is at least one-third more valuable than that made in open yards, or, in other words, ten loads made under cover produce an effect equal to that produced by fifteen loads from an exposed yard. For the same reason, less litter is required, and the cost of attendance per head is less than with either boxes or stalls. Compared with open yards, cattle in covered courts make equal progress on less food, and more progress on a similar amount. The saving of food is variously estimated by different experimenters to be from one-fourth to one-eighth. Even taking the lowest estimate as the correct one, the adoption of covered courts would enable the farmer to feed nine beasts instead of eight on the same amount of provender. The explanation of the large saving is easy. The substances that produce fat in the food of animals are used mainly for burning in the lungs to keep up the animal heat, and it is only what is left after this is effected that goes to the body in the shape of fat. Now, in covered yards the animals are kept warm, and hence less food is required for sustaining the animal heat, and thus more is left for the production of food. The great desideratum in the construction of covered yards is ensuring perfect ventilation, combined with entire freedom from draughts. Each animal should be allowed at least one hundred and seventy square feet of surface, and if the yards are larger they should have some internal divisions, a limited number of animals being kept in each compartment; this facilitates the assorting together of animals alike in size, &c. Another point never to be neglected in the constructing of buildings for fattening cattle is a constant supply of pure water to which the animals can at all times have free access. While I recommend covered yards for the bulk of the cattle, a proportion of boxes are almost indispensable, as, however well you may assort the lots in their different compartments, there are always some of the stronger animals getting more than their due proportion of food. In boxes, this is impossible, and in this respect they are invaluable. The number of boxes should be arranged so as to allow a box for each animal during its last month of feeding, and as soon as each lot are sold from their boxes their places should be supplied by the most forward of those in the yards. The next important requisite in the feeding of cattle is obtaining the services of suitable attendants—no easy matter, as

men of the right sort are seldom in want of employment. A good cattle-man makes his business his hobby, takes pleasure in his work, studies the comfort, likes and dislikes, of each animal, and does for them, of his own accord, what no amount of instruction or supervision could ensure. A man of this stamp is invaluable. As a rule, he will detect anything amiss with an animal hours before a more ordinary observer; will know when to give and when to withhold—when the food should be increased, and when reduced. I have often marked the difference in condition of two lots of cattle which in every respect have received similar treatment but were under the care of different cattle-men. Cattle should receive their food with the greatest regularity and the utmost expedition, and, as soon as they are done eating, all unfinished food should be at once removed, the boxes cleaned, bedding shaken up, and, if necessary, increased: after this, cattle generally lie down, and should not on any account be disturbed until the next feeding time. The litter for covered yards and boxes should be cut into lengths by a machine for the purpose. This would insure the manure being in a state fit for direct application to the land whenever it is necessary to remove it. The necessity of keeping feeding animals warm has already been alluded to. The best temperature, however, is not easily defined, as it varies with different breeds and different animals of the same breed, according to previous treatment. As a general rule, the temperature cannot be too great, provided always it does not make the animals perspire. Every feeder of cattle who wants to make the most of his farm-produce should possess three machines, viz., a grinding mill, a chaffcutter, and a turnip pulper, and, assuming that they are conveniently placed and properly used, the saving they effect is amazing. We cannot feed cattle on concentrated food alone. Bulk is absolutely essential to health, but it does not follow that the food used for this purpose need be of a high nutritive value, as it is easy to increase the concentrated food to bring its feeding qualities up to any standard required. Now, by the aid of the chaffcutter and subsequent preparation, straw, that would be refused by the animal if given in its natural state, can be rendered highly nutritious, and is eaten with great relish. When feeding on a mixture of chaff, pulp, meal, &c., all waste can be prevented, the animals are enabled to take more rest, shorter time being occupied with eating, and choking is impossible. Everyone with whom I am acquainted who use chaff and pulp turnip speak unanimously in favour of the system, but considerable difference of opinion exists as to whether the mixture should be given fresh, or allowed some time for fermentation. I am inclined to believe most in the latter system, as the fermentation converts part of the starchy elements of the food into gum and sugar, which is a stage nearer to fat, besides imparting a sweetness which makes it more relished by the animals. Mixing the pulp roots and the chaff together with a proportion of meal for each animal, covering up and allowing it to remain till the next day, then scalding with boiling water, and given to the animals warm, answers the purpose very well. The addition of a little salt to the mixture is also a great improvement. Another plan, introduced by Mr. S. Jones, of Chrishall Grange, Safron Walden, is to cut the straw into chaff in early summer, mixing with every ton of cut straw one hundredweight of green rye or tares and one bushel of salt. This mixture is stored till the winter, the green rye causing it to undergo slight fermentation, which greatly increases its value as a feeding material. According to an analysis made by Professor Voelcker the flesh-forming substances are increased from 2.93 in the straw chaff to 4.19 in the fermented mixture, and the fat-forming matters from 4.26 in the straw to 10.16 in the mixture. Without placing too much reliance on these results, the system is, at all events, well worth a trial, and I would advise all who have the opportunity to test its practical value. I have not done so yet, but purpose preparing some of the mixture for next season. In addition to turnip and chaff, or other food essential for bulk, it is usual to hasten the feeding process by the use of concentrated food, such as meals, cakes, &c. To use these foods to most advantage I will not say a knowledge of chemistry is indispensable, but it certainly is a very great help, only, however, when combined with the requisite practical knowledge; without the latter qualification the chemical knowledge is of little use, as it cannot be applied to advantage. The food of all animals contains the elements of flesh, fat, and bone; and all foods contain these elements, but in very different pro-

portions. Thus, while bean-meal contains 23 per cent. of nitrogenous or flesh-forming substances, barley-meal barely contains 11 per cent. On the other hand barley-meal contains 63 per cent. of fat-forming materials, while bean-meal only contains 48 per cent. All animals require in their foods the elements of flesh and fat, and, as we have seen in the case of bean and barley meals, these elements exist in very different proportions; so in like manner different animals require different proportions of these elements. Take, for example, the horse. In this case we do not want the animals covered with fat, the requirement being a capability for hard work, necessitating great wear and tear of the muscles or fleshy part of the body, hence a food rich in nitrogenous or flesh-forming materials is clearly the desideratum here. Now, beans in a wonderful degree fulfil this condition, and, what is more to the point, they answer as well in practice as in theory. Feeding cattle, on the other hand, undergo little exertion, hence the waste, or wear and tear, of the muscles is comparatively small, and as the object in this case is the production of fat, it follows that a food containing a large portion of fat-forming material, such as barley-meal, is adapted to the end in view, and practice again fully bears this out. To increase the size of a muscle use, and pretty constant use, is essential. Now, this being incompatible with feeding cattle it follows that the muscles do not increase in size, and the extra weight is entirely due to the production of fat; and from this fact we can draw two important deductions: first, the advisability of obtaining animals for feeding purpose with well-developed muscles, and, secondly, the absurdity of giving feeding cattle large quantities of bean-meal or other food rich in nitrogenous compounds. I do not wholly condemn the use of bean-meal for fattening animals, a small proportion mixed with Indian corn-meal corrects the laxative tendency of the latter and forms a very good mixture, and a mixture of meals is at all times to be preferred to any one singly. The market price of the different ingredients in a mixture should in a manner regulate the proportion of each, keeping in mind at the same time the formation of a food suitable to the end in view. Chemical analysis, though most useful for determining the relative values of foods, cannot be entirely depended upon. Some substances when analysed show a high feeding value, and yet are practically useless on account of containing some prejudicial substance either poisonous to the animal or hurtful to the flavour of the meat; other causes, such as physical condition, and the likes and dislikes of the animal also operate against the agreement of the analysis and the practical worth of the food. In regard to cakes, I believe that made from pure linseed to be the best for feeding purposes, and a capital feeding material it is; at the same time, I have long held an opinion that the price at which cakes are sold is really too high to warrant us in using them as extensively as we do. It has been computed that five pounds of linseed cake make one pound of meat, and six pounds of barley or maize meals do the same. Now, taking barley at 1s. per stone, about the average price of grinding samples, and linseed cake at 1s. 6d. per stone, or £12 per ton, we find from the above data that six stones of barley meal, costing 6s., will make 14lbs. of meat, and four stones of linseed cake, also costing 6s., only make 11lbs. of meat, or a deficiency of 3 stones 8lbs. in every ton of the cake used; and calculating the meat deficient at 9s. a stone we find it represents a money loss of £3 17s. Now, I cannot guarantee these figures to be absolutely correct, but even if the loss is one-half or one-third less than they represent, it is surely quite enough to caution us against the too extensive use of a dear feeding material when we have a cheaper substitute. It must be borne in mind, however, that the price of linseed cake does not vary so much as the ordinary cereals, hence in some seasons it will be comparatively cheaper than in others. Good samples of rapecake are often very little inferior to the best sorts of linseed cakes and can be bought at a much cheaper rate. Before giving it to cattle, however, it should be ground and made into gruel, and mixed with the chaff; prepared in this way cattle are very fond of it, which is not the case in its natural state. The amount of cake and meal given should be regulated by the appearance of the feces, which always show when an animal is getting more than it can properly assimilate, and if the cattle-man pays attention to this he can regulate the quantity accordingly. Many people contend that even if the cake and meal

are not assimilated they are not wasted, as they increase the value of the manure. Be assured, gentlemen, this is a great fallacy. What is not assimilated merely passes through the animal without doing it the slightest good, but often positive harm, by deranging its digestive system, and the manure is only increased in value to the extent it would have been if the extra cake and meal had been thrown into it direct—a very expensive way of increasing its value, and it may be taken as a safe rule that if any feeding material does not pay as a food it never will as a manure. As regards the disposal of fat cattle, I think they should be sold as soon as fat. As a rule this will pay better than keeping them on for any particular sale or rise in market price, and as soon as one lot of animals are removed, another should be put in their place. Those who possess good buildings for feeding cattle should never have them empty. Like expensive but valuable machines, the more they are used the better they will pay. There is nothing I more dislike to see than empty cattle yards, and it is only necessary to divest our minds of the idea that turnips are an essential for feeding to enable us to devise some means of feeding cattle in the yard all the year round. On many farms the cost of the turnip crop is enormous, and, assuming that both summer and winter feeding are carried out and the cost of each correctly estimated, I would be greatly surprised if the balance was not in favour of summer feeding. Those who have tried summer feeding cattle in yards compared with grazing them in the fields almost unanimously decide in favour of the former, not only because the cattle improve faster, but also because a greater number can be supported on the same area, besides other advantages to which I need not here allude. I am so thoroughly imbued with the truth of this that I never would graze a single beast fit for feeding. In young cattle it is different, as in their ease exercise is essential for developing the muscles and securing symmetry. To carry out summer feeding to advantage a succession of crops must be arranged. The following, extended or modified for particular circumstances would generally suit. A quantity of mangold or cattle potatoes should be in readiness to supply the place of the turnips. These finished, winter tares and rye, sown in a sheltered situation, should be fit for cutting. After which; early top-dressed seeds and then early spring tares, followed by second crop of clover. After which, early sown greystone or white turnips to last until the ordinary turnip crop is ready. To each kind of food the animals must be gradually accustomed, getting all along a due allowance of concentrated food, such as meals, cake, &c., and, above all, it is most important and absolutely essential to success, that they should have an unlimited supply of pure water. If cattle are to be grazed they should be taken up early. Mr. McCombie states that one week's feeding in August and September is worth three in the dead of winter. Whether this be so or not I cannot say, but of one thing I am certain, cattle never improve outside after the weather gets cold, even though they have plenty of grass; besides this, an extra growth of hair takes place which causes them to perspire when put in to feed. I have often noticed in bad turnip seasons feeding beasts can be bought comparatively cheap, and invariably when fit sell at a good price. This should prevent us shirking feeding, as is sometimes done, simply because we have few or no turnips. It can be effected by the use of good straw-chaff rendered savory by a little treacle, together with a good allowance of concentrated foods and the never-to-be-forgotten water. I have said nothing about feeding cattle for show purposes, as I believe it seldom, if ever, pays. When it is done, the animals should be kept in good condition from the time they are calves, but never forced until within twelve months of the time they are to be exhibited. A food containing sugar will do much in keeping the digestive system in order. A feeding animal refusing its food from simple derangement of the digestive system is of frequent occurrence. In such cases a drink composed as follows will be found most useful, viz.:

Epsom salts	14 oz.
Sulphur	2 "
Ginger	1 "
Black antimony	$\frac{1}{2}$ "
Aloes	$\frac{1}{2}$ "

well powdered and mixed, and given in not less than four quarts of thin oatmeal gruel. In conclusion, gentlemen, allow me very shortly to draw your attention to two facts in

connection with the importation of cattle and wheat. These matters, though not strongly belonging to the subject of the present paper, yet have a most important bearing not only on feeding cattle, but on the whole question of the food of the people. 1st. The climate of Great Britain is perhaps better adapted than any other for the breeding and feeding of cattle and sheep. Mutton and beef of the best possible quality can be produced, and we have always a home market with an increasing demand. The foreigner, on the other hand, has to contend with a climate less adapted for this purpose, an inferior breed of cattle, and the risk and expense of exportation, together with the certain deterioration in transit. Besides this, up to the end of the year 1872, and since, for anything we know to the contrary, more of our own valuable cattle have died from imported diseases than all the cattle imported put together. 2nd. Many foreign countries have climates much better adapted for the growth of wheat than our own. This is proved by the fact that wheat can be imported into this country of quality superior to our own, and sold with a profit to the grower, at a price barely remunerative to the British farmer. Taking these two facts together, we draw several important deductions. 1st. As we have all the advantages on our side in the breeding and feeding of cattle and sheep, we ought to develop by every means in our power all our resources in this branch of agriculture, and have some stringent measures for protecting our herds from contagious diseases of foreign origin. 2nd. As we cannot on inferior soils successfully compete with the foreigner in the growth of wheat, it is worth consideration whether all our worst soils used for this purpose would not be more profitably employed in the growth of crops more directly available as cattle-food. Such changes as we have here indicated would give an immense impetus to the British cattle trade; and I feel sure, were it once properly protected and developed, we should have little need of extraneous supplies.

Mr. A. WOOD asked how they could get covered yards, giving 170 square feet for each beast, cheaper than boxes giving 110 square feet for each beast?

Mr. GOODRICK: Ninety square feet is a large one.

Mr. TROTTER, the secretary, said that the object the committee had in view was to draw out the views of the members as to the proper construction of farm buildings, for they would observe that farm buildings was the next subject on the card. He was asked by a gentleman to give assistance in designing farm buildings, but when he came to that part of stalls *versus* boxes he felt at a loss. They thought stalls could be put up cheaper than boxes, and also that the straw would go further when the cattle were in stalls than when accommodated in boxes. But they also had an idea that in boxes the manure would be superior than when the cattle were in stalls. In stalls the liquid manure generally ran to waste; and moreover the dung and straw being mixed together and thrown into a heap fermentation immediately took place and caused a waste. He mentioned these things to the committee, and they thought it was a fitting subject for discussion, to see if they could elicit various opinions upon it as to which was the most desirable system—stalls or boxes. They had no idea that covered yards would be recommended before stalls. It was quite possible, where cattle had the range of a yard, and not too many of them together, they would get friendly, and fatten quickly, but it sometimes happened that cattle like human beings were somewhat pugnacious, and disturbed one another very much, especially feeding heifers, and it was desirable to keep them separate. If they got opinions on this subject he should feel extremely obliged, and there were gentlemen present well qualified to give an opinion, so that from the bulk they might get the essence.

Mr. J. J. HABLE moved a vote of thanks to Mr. Brydon. Referring to analyses of cakes, he thought that these analyses to a farmer who was not conversant with the system of analyses were hardly of any use. If such a person was shown the analyses of rapecake and oilcake he would defy him to see any apparent difference in the two. The chemist, in analysing the cake found there was in it a certain percentage of water, oil, albuminoids, and woody fibre, and the rest he considered to be starch compounds. The reason why linseedcake was particularly valuable to stock was because it contained what was called muelage, which was a very feeding thing and a very healthy thing for all animals. Now in rape and the other seed cakes, the starchy matter was not in the form of

meilage, but was of an inferior nature, probably digestible woody fibre. The chemists did not even agree about the quantity of woody fibre, some of them boiled the cakes for two hours alternately in solutions of sulphuric acid and caustic soda, and thought that the residue was indigestible to animals, but there was no certainty about it. He was rather disappointed in not hearing from Mr. Brydon an opinion as to decorticated cottoncake. He could not say that it was more valuable than rapecake, but on account of its immense percentage of manurial constituents it must be valuable to the farmer. Decorticated cottoncake was worth two-thirds of its price as manure.

The SECRETARY observed that he had often heard that cottoncake was valuable as manure, but did it not arise from the cottoncake passing through the animal, and not being assimilated?

Mr. HABLE said there were great disputes amongst chemists as regarded the proportion of constituents in cake, and as to how much was assimilated by the animal, how much was lost in the air, and how much went into manure. The manure from decorticated cottoncake was very valuable, and spared them from having to purchase for the land such dear manures as nitrate of soda and sulphate of ammonia. In no cake did they get such a large proportion of nitrogen in its composition as in decorticated cottoncake. Burley meal might be cheaper to use in making beef, but the manure from it was only worth 30s. a ton, while the manure from the cake was worth £3 or £4 a ton.

Mr. C. MARSHALL seconded the vote of thanks to Mr. Brydon for his paper, and, alluding to the mixing of cut straw with green rye in the early summer, said he should like to know what plan they would take to preserve this till the winter? It seemed to him that they would require another set of buildings to keep this stuff till the winter.

The CHAIRMAN: Fill the straw barns with it.

Mr. MARSHALL said that in regard to the question of cakes and meal, he had often noticed when he had sheep on turnips the difference there was afterwards in those places where they had got oats and where they had got cake. Two years ago sheep were put upon some turnip land of his, and the sheep on the worst parts of the land got oil cake. Wherever these latter sheep had moved across the land he noticed not only in the oat crop but also in the clover crop a distinct difference in the crops as compared to that portion of the land where meal instead of oil cake had been given to the sheep, and there was much more value in the manure from cake than from meal.

Mr. PATTISON said he entirely agreed with Mr. Brydon as far as the feeding of the animals went, but he disagreed with him as to covered yards. In these yards the animals knocked each other about, and the strongest animal got over much food and was knocked up for two or three days afterwards. They were never sure of each animal getting its fair share of food, while if they were separate they could easily see if the animal had eaten its share of food or if any was left over. The manure might be better in boxes than in stalls, but he thought cattle were more healthy in stalls than in boxes, as they had not the effluvia arising from the manure—an important matter in his opinion. As regarded, cut straw, &c., he regarded it as a valuable accessory to turnips; in fact, in place of them. Oil cake he considered was safer with meal, and his experience was that animals fed faster with oil cake with turnips or meal. A small overdose of meal would overset any cattle at any time, but that was not the case with respect to oil cake.

Mr. WOOD thought that if the animals in covered yards were all of a family they might go friendly together, but still they might knock against each other. They put ten cattle together, and then took those out that they were driven back, reducing the number to about seven in a large yard, but the chances were that some of them would get more than their share of the oil cake given to them. In boxes, he believed that cattle got on faster than in covered yards and with less trouble, and they always knew that each animal got its share of food—the weakest beast as well as the strongest got what was good for it.

Mr. J. B. LEE remarked that the other day he was speaking to a gentleman who had covered yards. He said that on his farm the system was to cut the horns off the cattle when young before being put into the yards. He said he could put a large quantity in these covered yards, and that they never knocked

each other about. Probably the cutting off of their horns sweetened their temper.

Mr. MARSHALL believed that the question as to whether stall or boxes were best depended very much upon the kind of farm they had. If it was a farm where they kept a lot of sheep on turnips boxes would be preferable, but if it was a farm where they pulled the turnips off, if they tied up the beasts they would take less straw.

Mr. DRYDON considered that heifers fed best in stalls. He was disclosing a secret, but he might say that he had 100 cattle on turnips just now, and he considered that steers did best in covered yards. He had some in covered yards in East Lothian; the steers were nearly all of a size, and he found that these cattle on this particular farm paid best in covered yards. If the cattle were heifers he would prefer either stalls or boxes for them, as they were more inclined to knock each other about than steers. The older steers were quiet in the yards, and if they were half-bred polled ones it was better still. He had not more than from four to six in each yard, with plenty of room and plenty of accommodation. The system that he had always found to pay best was to get his turnips grown upon as good land as he possibly could, feed them upon turnips, and in the last few weeks feed them off with oil cake.

The CHAIRMAN said as to feeding cattle from birth, that was a thing that ought to be attended to, though it did not suit the nature of every man's farm to breed and rear cattle; still, where a man did breed a beast, he did not approve of its being kept for two or three years, and he allowed to get into low condition, something like the system of Paddy with his pigs—fed them one day and starve them another, in order to make nice streaks of fat and lean. If a beast were allowed to get out of condition, it cost more to get it into condition again. He was sure of that, having tried it often in different ways. He had tried buying heifers and rearing their own calves, and feeding off the heifers and calves together in boxes. Instead of lean miserable yearlings, he had ten and eleven months old calves selling for £23 and £24, and he was told by the butcher that they made as good meat to put on the table as the beef they got from any three or four-year-old ox or heifer. Some might say that he fed these animals expensively, but then his beasts were as valuable as heifer calves as some were at three or four years old, and they must pay as well. In every case they should always keep on feeding, in the breeding and rearing of young stock, because if they sold them to others to fatten they would get a good deal more for them if they kept pushing them forward. They all knew that cattle were bringing high prices, and they were told that the country was so limited that every acre must produce all it possibly could, and he thought it was a waste of capital to have whole tracts of country on which they kept large numbers of lean beasts till they were three or four years old, and then fattened them. He thought that from the time a beast was born it should keep progressing as far as it could progress until it was fit for the shambles. The charge which the able Editor of the *Mark Lane Express* made against him was that he always took the landlord's view of the subject in these discussions. Having to see about the erection of farm buildings constantly, but still more now as to the enlargement of the present ones rather than the erection of new ones, as there was double the accommodation required now than there was twenty or thirty years ago, he must see what buildings would be most useful. The present tenant of a large farm might say that he wanted nothing but large covered yards, and on the estate with which he was connected an immense sum of money had been laid out in enormous covered yards, in some cases there being as many as twenty bullocks in one yard and all covered up. That farm might be let to-morrow and the next tenant might want it turned into boxes, and the succeeding tenant might want it into stalls. All this affected the landlord's pocket seriously, and the agent had to make up his mind which was the best. He had long made up his mind to adopt none of the three. On a large farm, where there was a large number of cattle fed, and heavy crops of turnips grown, there should be a certain quantity of covered yards. These were of great value, and in these some ten or fifteen bullocks might be seen feeding up to the knees in straw, none of them sticking one another in the vicious way that had been described, and doing very well indeed. On the same farm there should be a number of boxes, and Mr. Wood would

in that case have an opportunity of picking out the savage bullock that over-ate himself, so that he might be put into a box and put on prison diet for a while, by only giving him what was good for him. The weak bullock would also get as much as was good for him, and they would cherish him as much as they could. In his opinion there should be both covered yards and boxes on such a farm. On small farms he did not think a large extent of covered yard necessary, and for young cattle that were not being brought forward for the market the open yards as they were would be found tolerably useful, particularly where they had straw, though he did not say it was an economical way of using straw—the putting of it into open yards. On a smaller farm there should be both boxes and stalls, for he considered that heifers did better in stalls than in boxes. They did not need to exercise the animals; they did not want to develop the muscles of the heifers during the last five or six months in which they were feeding them for sale. They could keep them dry and clean, and they did not need to use so much straw. They had to carry out the manure every day and put it in a heap, and if they could put it in a covered place where it would not be washed by the rain so much the better. Bullocks certainly ought to have boxes, for they were always wet and uncomfortable when tied up in stalls, and did not do so well. He would have a fair proportion of stalls and boxes and covered yards, and open yards on smaller farms with sheds for young cattle to go into. Mr. Brydon made a remark about burning fat, he did not mean putting it into the fire as the Americans did to keep up the steam in a race between steamers, but the fat of the animal which went to keep it warm. Feeding cattle in covered yards kept them warm, and he had observed that when cattle were exposed to the bitter east winds which came sometimes in March and April they ate twice as much oat straw as they did before. Just as on a cold day they put on twice as much coal on their fires to keep their rooms in proper heat, and the consumption of fat in the animal was like the coal on the fire. They should not have an animal exposed to hot sunny days at one time and cold days at another, for an animal could not thrive alternating between heat and cold. Another matter of importance to breeders and feeders of stock was in reference to the attendants that waited upon the animals. Mr. Wood, sen., always rated him if he saw half a handful of cake left in the trough, for he would say, "Your man is giving that beast too much to eat." They should never leave anything over, and the man who attended upon cattle ought to know the taste and appetite of each beast. Men who fed cattle were apt to go about like a machine, and give a certain quantity of food to each beast, regardless whether it ate it all up or wanted more. As to preparing in early summer chaff mixed with green rye or tares and salt for use in winter, he did not know how they would be able to keep and preserve it till winter. That to him was an insurmountable difficulty, in the way of using it. He certainly was in favour of pulping roots and mixing it with chaff and cut straw; it was very useful, and he thought that if it was done and kept a few days it would become sufficiently moist and not require hot water to be poured over it. If they had a sufficient quantity of pulped root moist enough, they need not pour boiling water upon it, and to carry boiling water about farmyards increased the labour of attendance very much. He had recently used dried grains that he got from Hexham Brewery, mixing a little of them with every feed that was given to the beasts. They ran out of it the other day, and a lot of beasts stopped feeding, and would hardly feel without it. He had not tried the feeding quality of these grains, though he had no doubt himself of their feeding quality, and for making cattle eat their food they were most excellent. He had calves which had hardly got any milk, thriving well, and they licked up anything they got. He had rapecake and cottonecake broken and chopped, and with these grains, all put together, the cattle ate it up as they would the best linseed-cake. Often his man broke up a lot of rapecake, carried it into the shed, but the cattle would not touch it, and it used to lie there a long while before being eaten. Sheep that got oats with the turnips did not do so much good to the land as those that got cake along with the turnips. He had known farms laid down to grass two or three years when cake was given to the cattle feeding upon the land. The cattle fully

paid for the cake, and the improvement to the grass was wonderful; they could not have made it such if they had given it a good top dressing with manures for a few years running. It was on light land, and instead of going to moss it came to be like the best old pasture, by giving cake to the cattle on the land. That did not go in with Mr. Brydon's principle. Cattle could be kept improving on grass in summer as well as in winter, but according to the up and down system of farming a tenant had no right to improve grass land towards the end of his lease. If they got a tenant right satisfactorily arranged all these things would be taken into calculation, and the tenant would reap the benefit in the feeding of his cattle and get his share of the benefit to the grass by using cake upon it. Another point not touching upon the feeding of cattle had been referred to, and that was protecting their cattle against imported diseases. Many persons who were politicians thought they wanted to return to protection, but that was mere clap-net. He had always been a free trader, and they could compete with the whole world, and he did not believe that any of them wanted protection against competition, but it was a different thing to ask for protection against destruction of their cattle. If they brought cattle with diseases into the country, and these diseases spread among their own cattle, it not only ruined the farmer, but injured the whole country; and it was not only for the protection of the farmer, but for the protection of the public that diseased cattle should not be allowed to enter the country. There ought to be fat-cattle markets at the places of landing, where those intended for the shambles could be at once slaughtered, and the cattle brought to be fed in the country should be put in quarantine, the same as a ship that brought people suffering from a contagious disease. That was a reasonable request. He would now put the vote of thanks to Mr. Brydon, and he was sure they would all agree in thanking him for the excellent Paper he had read.

The vote of thanks having been passed,

Mr. BRYDON thanked them for the manner in which they had received his paper, and for the vote of thanks they had awarded to him. The first gentleman who spoke after he sat down, asked why a covered yard where an animal required about 170 square feet of surface, could be cheaper than boxes where 80 square feet was sufficient. That was simply on account of the divisions they were required to make to hedge each animal in. The same gentleman, if he recollected right, argued against yard-feeding on account of the animals "boxing" one another and all that sort of thing, and said the animals would not do so well. If he was correct in his impression, the gentleman meant open yards instead of covered yards.

Mr. WOOD: The same applies to one as to another.

Mr. BRYDON said he had never seen any difficulty with cattle in covered yards, with boxes round about, and plenty of room and water. Mr. Drydon, who had experience with regard to covered yards bore out what he had stated. Mr. Harle made some remarks as to the analyses of rape cakes and oil cakes. He did not say that rape cake was anything like so good as linseed cake, but looking at the price it was usually sold at it would be very often cheaper than linseed cake according to value, but as he observed in the paper it required to be prepared in the manner in which the chairman alluded to. Mr. Harle wondered why he had not referred to cotton cake. He left it out purposely; he thought it was a valuable cake, but more adapted for grazing cattle than those that were being fattened. He quite agreed that the manure was richer after linseed cake than after oats and meals and also a first-rate material for feeding sheep. Then as regarded stalls, he thought they were a capital thing for heifers, but they could not erect such an expensive erection as a great number of stalls, the expense would be very heavy. Bullocks, however, did not do well in them. On the whole, he thought if they got a good assortment of covered yards and boxes they were very well off. One gentleman said that the cattle thrive better in stalls than in boxes, but he always found that they thrive better in boxes than they did in stalls.

On the motion of Mr. Jos. Lee, seconded by Mr. Brydon, a vote of thanks was accorded to the chairman, and the meeting terminated.

THE BRECONSHIRE CHAMBER OF AGRICULTURE.

POULTRY.

At the February monthly meeting held at Brecon, the Rev. Garnons Williams in the chair, Mr. M. KINNARD B. EDWARDS, of Sam Farw, Bridgend, read the following paper :

The subject upon which I have the pleasure of addressing you this afternoon is, "The Home production of Eggs and Poultry in a commercial point of view," and it is my intention to treat this subject as far as possible from the farmers' point of view, rather than in connection with the breeding and production of prize and fancy fowls by amateurs or exhibitors. Agriculture in all its branches (like everything else) has made rapid strides during the past twenty years, and I think I may say that no branch of husbandry has improved more, or risen to greater importance than the various breeding of poultry in this country. The annual poultry shows that we now hold in almost every county in England prove more clearly than anything the advance we have made in this respect, and the tens of thousands that flock to these shows or exhibitions is a proof of the great public interest that is felt on the subject. Any stranger coming to this country and visiting these shows, where every conceivable breed of bird is exhibited in its highest state of perfection, both as to size and plumage, would go away with the idea that the poultry of Great Britain was all that could be desired, and that there was really no room for improvement, but the true state of the case is far otherwise. The fact is, that until quite recent years, the breed of fowl in this country (a few localities excepted) had been allowed to degenerate century after century, so as to become almost worthless in a commercial or pecuniary point of view. Fowls were merely tolerated upon the farm to act as scavengers, and living as best they could rather than being kept with any idea that a profit might be realised by them. The trifle that is realised from the poultry-yard was the acknowledged perquisite of the farmer's wife or daughters, and not in any way considered a part or parcel of the master's stock or profits, or in any way worthy of his notice. The farmer plainly saw his fowls consumed a quantity of his grain, and that he, individually, reaped no profit by their presence, and little wonder that he should have come to the conclusion (for quickly comes such knowledge) that "fowls don't pay." Well, as I said before, the tens of thousands who attend our shows, and the presence of the magnificent specimens of poultry to be seen exhibited, would lead the casual observer to believe there was little room for improving our yards, or necessity for stimulating increased attraction to the production of eggs and poultry; but the startling fact that we annually import into this country no less than 500 millions of eggs, to say nothing of the tons of poultry, shows us at once how utterly erroneous such an impression must be. Whatever we have to pride ourselves upon as a nation, it certainly is not the quality or quantity of our poultry, and, as long as we continue to look abroad for this stupendous supply (500 millions) the less we say about our poultry or poultry shows the better. That poultry shows are useful I think nobody will deny, inasmuch as they tend to stimulate an increased interest in the keeping of good poultry and encourage the breeding of the best and most profitable stock. It is, however, one thing to have a valuable article within your reach, and another to make use of it and profit by it. It is a comparatively easy task for our amateurs and poultry fanciers to introduce into this country from abroad the most valued breeds of foreign fowl and exhibit them at our shows, but quite another matter, and a far more difficult one, to revolutionise the poultry yards of the million—the 400,000 farmsteads of England—by inducing them to introduce these "new fangled" birds. To import and breed a sufficient stock for the desired improvement of the country is the work only of a few years, but to induce the agricultural population of the country to improve their stock by the introduction of fresh blood will be the work of many. Not until this desired end is gained can we hope for any great change in the home production of eggs and poultry, or the public be benefited by the increased quantity and improved quality. Although I am

ready to admit that the farming classes of this country are fully alive to their own interests, when it can be shown to them by practical and ocular demonstration that by making a change they will increase their profit; yet it cannot be denied but that this important branch of our community are, in every sense of the word, "conservative," and will make no change unless irresistible proof is forthcoming to prove the importance of that change in a pecuniary and commercial point of view. Now, when we consider that poultry generally, and fowls in particular, have for centuries been looked upon with disfavour in a pecuniary sense, and the acknowledged idea that fowls "don't pay" has been handed down from generation to generation, it is not surprising that no very marked change has yet taken place in the improvement of the breed, or increased number of fowls in the farmsteads and cottage runs throughout the country. This change, as I said before, must be a gradual one, and can only be brought about by degrees, and by the presence of these more valuable and profitable birds becoming scattered throughout the country, and the example and success of those fanciers, who are now yearly increasing, and may now be found located in almost every district. Apart from the inherited prejudice which exists against fowls, and the objections against newly introduced breeds, there is another cause why so little improvement has taken place in the breed of farm-yard poultry, and it is this. Until within the last year or so the prices asked by the breeders of the best stock for really good birds has been so exorbitant as to preclude the farming and cottage classes from purchasing, however much they might be inclined to improve the stock; also the price asked for eggs for hatching has been such as to draw a smile, or "wish you may get it" from the astonished applicant, who had hoped to secure a setting of eggs for 1s., instead of the 15s. or 20s. asked. It is no uncommon circumstance even now for good prize birds to command from £5 to £10 each, the price of a couple of sheep or a bacon pig, and a dozen of eggs for hatching for prize birds often command a guinea to 30s., and it was but a year or two ago difficult to purchase at a more reasonable price; but a change has now taken place in this respect owing to the very large number of prize poultry breeders that have sprung up and created that most wholesome of all influences—competition; so that now really first-class birds and eggs for hatching can be obtained at a really moderate figure; indeed, at a far more moderate price (considering their real intrinsic value) than what you would have to pay for common barn-door fowl eggs. Good stock birds are now to be had at 7s. 6d. to 10s. each, and this cannot be considered a great price for a huge Brahma cock weighing 9lbs. or 10lbs., and eggs from these birds are now advertised in any number at from 3s. to 5s. the sitting. I will now direct my remarks more particularly to the several newly introduced breeds of foreign fowl and endeavour to point out the particular advantages these several breeds of fowls possess in a pecuniary or commercial point of view. I will commence with the Brahma as being probably the most generally useful and important of the comparatively new introductions. This large Asiatic fowl surpasses all others in size and strength of constitution, and from its suitability to our variable climate and from its many good qualities it appears to have made greater way and increased in favour more rapidly than any other breed. The advantages that this breed possesses pre-eminently over all other birds is its extreme kindness, docility, great size, and being a good layer, especially through the winter months, when eggs are most scarce and valuable. In character the Brahma is somewhat similar to the Cochin, only more lively in its carriage and more inclined to roam in search of food. It also carries more breast meat, is less coarse in the bone, and with a better coloured skin. As a table-bird it will not compare with the Dorking, but the Brahma will thrive and do well where the Dorking will pine and die. The Brahma will cross freely with almost any breed, and it is perhaps for the purpose of crossing that the Brahma

will be found most valuable. The celebrated Surrey chicken is highly esteemed in the London market, and is produced from a cross with the Dorking cock and Brahma hen. The more common cross adopted however throughout the country is the Brahma cock with Dorking or barn-door hens. The importance or advantages gained by this cross is imparting the great size and strength of constitution of the Brahma into the Dorking without much deteriorating the value the Dorking pre-eminently possesses as a table-bird. The Brahma is, as I said before, a good winter layer, and equal to the Cochins as a sitter and good mother to rear strong and hardy chickens, and when crossed with the Dorking produce admirable egg-layers. It is not uncommon for Brahma cocks to attain the weight of 12lbs. and 14lbs. and hens 10lbs. to 12lbs. each bird. This about the weight of two couples of common barn-door fowl. The Houdan is the celebrated French fowl (the Dorking of France), more highly prized in that country than any other breed perhaps, not excepting the Crève Cœur, and since its introduction here it is equally highly thought of, and promises to supersede most other breeds. The advantages this breed possesses is its early maturity and great readiness to fatten, being particularly light in the bone and delicate in flesh; it is also a precocious layer of large white eggs throughout the year, never desiring to sit. It is no exaggeration to say that the Houdan will fatten upon the same food that will scarcely keep other fowls in ordinary condition. There is another valued French fowl fully equal to it in this respect, that is the Crève Cœur, a magnificent jet black bird of very considerable size, and possibly the most precocious fowl known to fatten; these birds are now well established in this country, so much so indeed, that it is easier to purchase thoroughly pure and good specimens for stock purposes here than it is in France. Among the most celebrated of the English breeds come first the Dorking, followed by the game and Hamburg. The Dorking may in every sense be considered a purely English fowl. Its antiquity clearly dates back to the Roman period. For table purposes the Dorking appears to hold its own against all comers, and certainly from its size, amplitude of breast meat, delicacy of flesh, and early maturity, it is not easily surpassed. But as a layer the Dorking is found very variable; some strains are said to be fair layers, but as a rule this breed cannot be depended upon for the production of eggs in any quantity, and only through the fine summer months. The disadvantages the Dorking possesses is the delicacy and difficulty in rearing the chickens, and the liability of the breed to disease, save in exceptionally warm and dry localities. To increase the strength and stamina of this breed and make it more generally useful and suited to our climate it is found necessary to cross it with some of the larger and stronger breeds, and the cross invariably produces a valuable and profitable bird. We next come to the game, the bird that is sure to be the cock of the walk wherever he may be thrown. The game is to the other breeds what the racehorse is to the more common breed of horses. The value of the game lies rather in its great courage, bold spirit, and great beauty, rather than possessing any super excellent qualities in a commercial sense. The flesh of the game is, however, superb, but there is comparatively little of it, the bird being anything but large or meaty. The hens are good layers of peculiarly finely flavoured eggs, and I think there is no bird that is better able to cater for itself or will wander a greater distance in search of food. We now come to that most beautiful and highly prized breed, the Hamburg—the gold and silver spangled, and gold and silver pencilled varieties. These beautiful birds have been established for centuries amongst us, and may be looked upon as an English fowl, although the first stock was probably brought here by a Dutch merchant trading with this country. Such precocious and determined egg-layers are these birds that they have earned the well-merited name of every-day layers or everlasting layers. The eggs, although somewhat small in size, are rich in quality, and the shell white. Indeed, the size of egg laid by the spangled variety is not very much smaller than the egg of the Cochins or Dorking, both of which lay a small egg in proportion to the size of its body, whereas the Hamburg's egg is large in proportion to the size of the bird. It is not at all uncommon for Hamburgs to lay from 250 to 280 eggs in the year, and occasionally 300 is obtained from a single bird. Two hundred and forty would, I think, be a fair average yield from this breed. For table purposes they cannot be much considered owing to their small size. They are, however,

plump and well flavoured and make excellent roast chicken. They are small eaters and very busy caterers for themselves, and obtain a larger proportion of their necessary food by searching about for it. In this respect they with the game are essentially a farmer's fowl. The black Spanish or the white-faced Spanish cannot now be considered other than a fancy fowl, the continued breeding in-and-in to obtain this peculiar face has deteriorated its value as a profitable bird. Instead of the hardy, useful, old-fashioned red-faced bird that formerly existed we now have a delicate fancy fowl less hardy and smaller in size. The Spanish have ever been noted as good summer layers of a large white egg, and were it not for its black legs would be highly esteemed for table purpose from the whiteness and delicacy of its flesh. I have touched upon the generally acknowledged advantages that the best and most approved breed of home and foreign fowls possess, and I shall now direct your attention to the general treatment of fowls and the return that may be realised by them with proper management, showing the importance in a commercial sense that would result from an increased quantity being kept and the quality of our breed being improved. The first thing to be considered by those who keep fowls should be to obtain that breed most suited to the climate of the locality as well as the accommodation and convenience of the individual poultry keeper. To the farmer who possesses an unlimited grass run, with farmstead well sheltered and soil dry, the Houdan or Brahma Dorking would be found the most generally useful and profitable breed to keep. As layers, considering the size of their eggs, they are not to be surpassed, and as table birds, heavy, large, and meaty, with readiness to fatten and quick growth to maturity, they will always command a ready market and the highest price. To the cottager who is obliged to confine his fowls within a narrow space the Brahma or Crève Cœur will probably be found the most profitable and satisfactory, combining egg-producing power and flesh-forming propensity in the same bird, and less likely to suffer by confinement than any other bird, as they are bound to thrive in a space where Houdans, Dorkings, or Hamburgs would pine and die. For the production of eggs in winter these birds are not to be surpassed, and this is a necessary qualification for the profitable keeping of fowls in a confined state, inasmuch as the increased price eggs obtain in the winter months will compensate for the increased cost of keeping fowls depending entirely upon hand feeding. We must now come to the more important part of our consideration, and which is the comparative question of cost of keeping and return that may be realised by their produce, for it is upon this head the whole question turns, which is the "home producing of eggs and poultry in a commercial point of view"; and unless it can be satisfactorily shown that fowls properly cared for are capable of returning a profit commensurate with the cost and attention bestowed upon them, it will indeed be useless to attempt to encourage the more general keeping of poultry by our struggling population, who can only afford to consider the subject in its pecuniary sense. However true the cry may be "Poultry don't pay us," there is one thing quite certain, which is, that they do pay our immediate neighbours, who not only produce sufficient eggs and poultry for their own enormous demand, but a surplus sufficient to meet our pressing wants. It has been said (by way of excusing ourselves) that the French, the Dutch, and Germans have the advantage of climate over us, and that they can produce poultry and eggs at a profit when we can't. This, however, is mere assertion, and is not borne out by the experience of those who have resided in those countries, and I myself, in visiting Holland and Germany, have quite failed to see that climate has much if anything to say to the matter. The true secret of the success of our neighbours lies rather in the fact of their understanding more about the management of poultry than we do, and paying far more attention to the feeding and breeding, and generally, in the care and attention they bestow upon their stock. Fowls are also far more generally kept by the country people and in far greater numbers, and the breed is generally far superior to our common fowl, and not allowed to degenerate to the same extent. We will now consider in detail what is that necessary treatment and management necessary to enable the poultry-keeper to realise the largest profits this valuable bird is capable of returning; but before doing this I will, by way of contrast, just touch upon the treatment that has been very generally adopted by ourselves during the past two hundred years by the bulk of

the farmers and cottagers in this country. There will, I think, then be little difficulty in understanding why the cry has arisen far and wide that fowls and poultry don't pay. With twenty millions of mouths to feed, and depending as we do on foreign supply for one-half the food we consume, we cannot afford to keep fowls at a loss, and they, like everything else in this matter of fact age, will have to stand the test of "Does it pay?" and it will stand or fall by the public verdict. Whatever may be said to the contrary by those who cling to old customs and ideas, it is undeniable that our old stock of poultry has degenerated into a small unprofitable mongrel, rather tolerated upon the farm rather than cared for as a source of profit. I will not go so far as to say that our poultry has so degenerated as to be necessarily unprofitable, for I am of opinion that even our commonest mongrel breed, if properly treated, will return a profit; but what I do say is that degeneration of our breeds coupled with imperfect housing and protection, and insufficiency of food, and want of general care and attention, has made them wholly unprofitable stock; hence the cry has spread far and wide that poultry will never be made to pay. There are certain essential rules that must be practised to make fowls profitable. The first is to keep your stock young, and clear off your birds at that age at which they leave the largest profit. Secondly, to hatch your chickens as early in the spring as possible, so as to give them advantage of the entire summer, to hasten them to lay in maturity, and so obtain as early a supply of eggs as possible, and at a season when they command the highest price. Thirdly to keep a breed of fowl that is hardy and comes early to maturity, easily fattened for the table, and a precocious and prolific egg-layer. Fourthly, comfortable housing together, with a regular supply of sufficient food to keep them in laying condition. Now I think that most prescut will agree with me when I say that the observance of these essential rules is the exception and not the rule among the general run of poultry-keepers. Fowls of all sizes, breeds and ages are to be seen scampering about the farmsteads, here and there picking up their living as best they can; roosting about the trees and farm-buildings where they choose, making nests and laying about the premises here and there, and many of the few eggs laid being lost or stolen. Chickens are hatched at all times throughout the summer—late rather than early—and few if any eggs are consequently produced during the winter months, the season when eggs are the most valuable, commanding the highest price. A minimum of eggs are only produced, and these during the spring months and at harvest-time, when food is most abundant, and when eggs are most plentiful in the market and only command the lowest price. It is estimated that our common mixed breed of barn-door fowls so treated will not produce more than 55 to 60 eggs in the twelve months, and these produced at a time of year when eggs seldom command a higher price than 8d. per dozen, or a total annual return from each bird of 3s. 4d. Now, if we deduct from this the value of the food consumed, and which it has gathered for itself, we cannot possibly put this at less than one half-penny per week per bird, or a total of 2s. 1d. for the twelve months, which, deducted from the 3s. 4d., leaves the miserable return of 1s. 3d. to cover cost of rearing, attendance, casualties, &c. Their manure or droppings is invariably wasted by the birds roosting about the farm-buildings, or if confined to a proper henroost their manure is seldom or ever collected, or made use of and turned to a profitable account. With management such as I have described it is hardly to be wondered at that fowls are considered unprofitable. Very little if any better or more profitable result is obtained by rearing chickens for market purposes. Chickens are, as a rule, hatched and reared at a season when there is a glut in the market, and command a correspondingly low price, and owing to their comparatively small size and half-fatted condition the price realised is such as to leave little or no profit to compensate for the cost of food and attention that has been bestowed upon them. As I said before it is essential in rearing fowls for market purposes to hatch your birds at a season when the market will not be overstocked, and to keep a breed of bird for this purpose that shall combine size and weight with early maturity and readiness to fatten. As a rule it cannot be denied that the farmer's poultry-yard does not receive the same care and attention that is bestowed upon other farm stock, and yet there is certainly no stock kept that will bring in a larger or more immediate return than poultry, managed as it should be. Fowls are the greater part of the year, left to themselves

to live as best they can; or if fed, insufficiently fed, and only upon refuse corn. At one season of the year—harvest-time—there is a superabundance and the rest of the year a scarcity, and not sufficient to enable them to maintain themselves in a profitable condition. I will now direct your attention to a simple, inexpensive, and rational system of poultry management such as may be practised by all, and one that will not fail to return a splendid profit from this most profitable branch of husbandry, practised as it should be, and I shall conclude by showing the national importance, in a commercial point of view, of producing the five hundred millions of eggs we now import. I will illustrate the profitable management of a small poultry-yard by describing that which I see practised at an imaginary model farm, where fowls are kept as they should be and made to return a clear annual profit averaging 10s. to 12s. per bird, or a total annual profit of £37 from 60 laying hens and an equal number of fatted chicken. I visit this farm early in November and I find a fine healthy stock of Brahma Dorkings, Houdans, and silver-spangled Hamburgs. I am taken to the hen-house, which I find to be a simple structure, built in a sheltered situation facing south-east; it measures 8ft. long by 4ft. wide and 7ft. high; the perches are all placed at a uniform height of 3ft. from the ground, and the nests are arranged at one end in two tiers, one directly over the other, one row on the ground for the sitting hens and the smaller nests directly over them for the laying hens. The building is perfectly dry and free from damp, airy, well ventilated at the top, and rather light; the floor is asphalted to prevent the damp rising from the ground. At the time I visited the yard, early in November, the pullets hatched during the past March are now commencing to lay, to replace the older hens hatched the year previous; and after they have done laying, which are now being fattened and killed off at the age of 19 months, these pullets continue to lay off and on through the coming winter and following summer, laying an average of 180 eggs per bird between this time and the following autumn, at which time they in their turn are killed off to make room for that year's succession of pullets then commencing to lay. These eggs, one-half of which are produced during the winter months and fetch 15d. per dozen, and in the summer 9d. per dozen, realise a total of 15s. per bird, and each one fatted and disposed of in autumn at the age of 19 months will realise 2s. at 4d. per lb., their average weight exceeding 6lbs.; this gives a total return of 17s. as the return from each laying hen killed at the age of 19 months, exclusive of the value of their manure made during the time. Some few are allowed to live another year, and are killed twelve months later, as these older birds make the best brood mothers, and lay an increased number of eggs the second summer; and in cases where poultry keepers are unsuccessful in rearing chickens, and have not the necessary accommodation for so doing this, they will find it to their advantage to kill off their hens at the close of their second laying season instead of the first. The system of feeding practised at this farm is as follows:—The fowls leave their roost at the first rising of the sun, and are out and about for two hours pecking up the early worms, &c.; at eight o'clock the fowls get their morning meal, which consists of a mess of meal mixed to the consistency of a stiff dough, $1\frac{1}{2}$ ozs. being allowed to each bird. This meal is continually varied, one time oatmeal, another barley meal or Indian corn meal, or bran or buckwheat meal, and a small quantity of bran being mixed through it; this is thrown to them on some clean spot, each fowl being allowed as much as it will peck up greedily. Mid-day they get a small allowance of boiled potatoes, parsnips, carrots, or mangolds hot, with a little bran and chandler's graves or other stimulating substance mixed through it; and at four o'clock, before retiring to roost, they are supplied with whole grain at the rate of $1\frac{1}{4}$ ozs. to each bird, a change in the variety given being made twice-a-week. The cost of the feeding I have described throughout the year averages $1\frac{1}{2}$ d. to $1\frac{3}{4}$ d. per week per bird, taking the price of grain at 1d. per lb.—a fair average price, and this feeding is found to keep the stock in the highest possible state of health and profit. Five or six broods of chickens are hatched every March to replace the hens killed off each autumn, and so a succession of young and profitable birds is being continually kept up. A little dry mould or earth is sprinkled twice-a-week over the droppings of the fowls in the hen-house to deodorise their excrements, fix the ammonia, and keep the house sweet, and so render the manure as valuable as possible, and obviate the necessity of

continually cleaning the house. This manure and earth is removed every two months, and used upon the farm or garden, and found to be nearly equal in its fertilising power to guano. Two or three broods of chickens are reared for market purposes during the months of March, April, May, and June, of either the Houdan or Brahma Dorking breed. The chickens are forced on by liberal feeding and continual change of food, so as to get them ready for market as soon as possible. The chickens are usually fit to kill at the age of eleven or twelve weeks. During this three months they are estimated to consume food to the value of about 1s. 5d., besides what they gather for themselves, at which age they weigh from $4\frac{1}{2}$ lbs. to 5 lbs., and realise 3s. 6d. each, leaving a profit of about 2s. on each chicken. The young chickens are cooped for ten days with their mother upon a grass plot, and fed on a variety of nourishing dainties to give them a start in life; after this time they are allowed their liberty with the hen, and fed liberally three or four times a-day. At the age of ten weeks they are confined for a fortnight, and fed upon as large a quantity of fattening food as they can be induced to consume—chiefly oatmeal and milk—they are then killed and disposed of. The profits derived from fattening for the market (considering the risk and attention necessary) is not at all equal to that realised by laying stock. The former require little or no attention beyond mixing and throwing them their food two or three times a-day, and daily collecting their eggs, and the manure made during the twelve months is estimated to well cover all cost for attendance. The casualties that arise from the death of chickens, if found to be very trifling—suppose one-third of each brood to die before they attain the age of eight weeks—the cost of food consumed by a young chicken of this age will certainly not exceed 3d. or 4d., and what a trifle is this deducted from the 10s. or 11s. clear profit realised in twelve months by each fowl that comes to maturity! Well, to sum up the total receipts and expenditure of this lot of fowls it will be found to be as follows. On debtor side we have—

	s.	d.
Cost of rearing and feeding 60 laying hens to the age of 19 months, at the rate of 1½d. per week for grown birds, and half the amount during chickenhood—each	6	8
Well, on the credit side we have—		
Cr.		
15 dozen eggs at an average price of 1s. per dozen, i.e., 9d. in summer and 15d. in winter, will realise	15	0
Value of fowl when killed in the autumn at 4d. per lb.—say	2	0
	17	0

Now deduct the above cost for rearing and keep during the 19 months (6s. 8d.) from the 17s. and we have a balance of 10s. 4d., a clear annual profit from each laying hen, and as I showed before a profit of 2s. in 3 months from each chicken reared for market, will thus give—

60 hens at 10s. 4d.	31
60 chickens reared for market	6
	37

representing the clear profit annually realised from this comparatively small stock of poultry. It is estimated that a fowl will void at least 1 oz. of dry excrement during the twenty-four hours; and allowing this manure in a dry state to be worth 5s. per cwt., which is certainly a moderate price, we have the nineteen months' manure from each fowl to the value of 1s. 9d., or a total on all the fowls of £6 5s., which allows over 2s. per week to cover cost of attendance. Profits such as I have here described I think all will admit will favourably compare with that realised from other farm stock, and this is obtained at far less risk and outlay involved in other stock. It will be asked by some upon what grounds fowls can be supposed to realise a larger profit than other flesh-forming animals. The answer is a simple one. In the first place, fowls obtain at least one-half their living, at no cost whatever to their owner, upon what may be called waste food, such as worms, slugs, flies, beetles, grubs, grass seeds, waste corn, and vegetable food, all of which they gather for themselves, at no cost to their owner; whereas, cattle, sheep, pigs, &c., depend wholly upon food purchased or raised specially for their use.

Again, the average price realised in the carcase for beef and mutton is only 4d. or 5d. per lb., whereas the price of fowl meat is at least 9d. or 10d., although produced at a much less cost; and, again, the profit realised by the eggs produced in proportion to the food consumed is far greater than that realised by producing meat. It may also be considered that an average yield of 180 eggs in the twelve months is a high average, but those who keep the best and most improved breeds, properly fed and cared for, exceed this average, 230 and 250 eggs being commonly obtained from certain breeds. It will also be considered by some that 3s. or 3s. 6d. is a stiff price for a chicken, and no doubt it would be for the wretchedly small-sized, half-fed birds one sees exposed in our country markets for sale. A large, meaty, well-fed Houdan or Brahma Dorking chicken, weighing 4½ lbs. to 5½ lbs., will as readily fetch 5s. 6d. as a small barn-door fowl one-half its size will realise 2s. or 2s. 3d. Although fowls are not sold by weight, a purchaser is entirely guided by size, condition, and general appearance as to the price he will give. It therefore comes to much the same thing. It is absurd to say, as some do, "Oh, a fowl is a fowl, and you will find no one to give more than 5s. a couple, no matter how big and good they are." I have sent fowls to market that weighed from 8½ lbs. to 9½ lbs. of the Brahma Dorking breed; and my experience is that an extraordinary large and well fed fowl will fetch a fancy price, really more than its relative value rather than less than it. I have now touched generally upon the poultry management, as it is and as it should be, and I trust that I have been able to show to the satisfaction of some that our home production of eggs and poultry is not what it might be, and that I have further satisfied one of my hearers who may not be partial to the feathered tribe that poultry, under certain conditions, may be made profitable farm stock. If it can be shown that poultry can be kept at a profit, and not only a profit, but a very handsome profit, then I say it is a disgrace—a national disgrace—to a great agricultural country like Great Britain, with its million of paupers, to think that we so shamefully neglect this important branch of industry, and depend upon our neighbours for the countless millions of eggs we annually purchase from them. Although I am an advocate for free trade, I believe that the existence of a heavy import duty upon eggs for twelve months would have a most wonderfully beneficial effect upon the country. The immediate effect of such a duty would be to so raise the price of eggs as to induce the more general keeping of fowls by the million, and in greater numbers than at present kept. The demand would be so great and pressing, and the price so high, that the energies of this country would be stirred up to the importance of this subject and the profit that may be realised by poultry keeping; and when this were once thoroughly understood, and the profitable nature of good breeds of fowl better and more widely known, I believe that in a very few years we should be ourselves producing the million and a-half of eggs we now daily import. The pauper population of this country has increased of late years to an alarming extent, now numbering over one million, besides another half-million that may be said to be on the verge of pauperism. Seven millions more are said to be living from hand to mouth, having made no provision for the future, and having no interest in life or stake in the soil of the country beyond their daily labour to occupy their mind and body. When we consider seriously that we have about our very doors one million paupers, besides nine millions (nearly one-half of our population) struggling for existence, and living from hand to mouth, I say this sad fact does not show the condition of this country to be in the flourishing state that our increasing revenues and hoarded wealth would lead us to suppose; and I would ask, cannot something be done to encourage the spirit of self-help among our cottage classes, by inducing them to take more interest in their homes by the keeping of poultry, pigs, bees, and the cultivation of a garden? Nine-tenths of the eggs and poultry we get from abroad are produced from that very class from which our pauper population springs. If our poorer neighbours abroad are able to make a living by the keeping of poultry, although they sell their produce at little more than half the price that we may realise, I say it is a disgrace for us to continue to import those articles we could and should produce ourselves. Now, suppose for one moment that our 400,000 British farmers, and say 200,000 cottagers and country residents, all kept a stock of say two dozen fowls, what number of eggs would these produce, and what profit be

realised, and how much money which now goes abroad would be circulating among our labouring population? I will tell you. The number of eggs these fowls would produce would be equal to five times the number we at present import. No less than 2,500 millions, representing, at 9d. per dozen, upwards of ten millions sterling, a sum more than sufficient to cover the entire poor rate of Great Britain. Do not these figures show the importance of this subject, and the benefit that would accrue to the public in general by the circulation of so many millions of money, and especially to the benefit of that class which so much needs a helping hand? I will now conclude by throwing out a few suggestions as to the best and easiest way of improving one's existing stock of fowls by the introduction of fresh blood. The cheapest and readiest way that will naturally present itself would be to introduce a cock bird of one of the best and most approved breeds to cross with some six or eight of your largest and best hens at present in your yard. A nine or ten-pound Brahma cock would probably be the best to cross with half-bred Dorking or full-bodied barn-door hens; or, if your stock is of a smaller breed, cross-bred Hamburgs, or half Spanish, a fine spirited Houdan cock may be introduced with greater advantage. In either case, your breed of fowls reared from this cross will be considerably improved the following year, both as to size, strength of constitution, egg-producing powers, and fattening propensities. Such a course, however, would be but a makeshift, and the better plan would be to clear out one's stock entirely, and commence *de novo* by the introduction of entirely fresh stock, and that the very best that can be obtained. Either a few birds may be purchased of the several breeds desired to be kept, and the eggs set aside for hatching as they are laid, or a couple of sittings of eggs from some near breeder of known respectability may be purchased, and so a stock of the best birds may be procured at little cost. The following year these birds may be either crossed or kept pure; but, in the case of allowing your birds to cross, it will be important to see that you allow but one cross, always breeding from the pure stock, and not from the eggs laid by the cross, or you at once commence to degenerate. A single cross judiciously done is rather beneficial than otherwise, as it almost invariably produces a profitable and precocious offspring with increased stamina and strength of constitution. The Brahma and Dorking and the Houdan and Silver Hamburgs are both admirable crosses, and the Crève cock may also be made use of with great advantage, combining, as this breed does, great size with superb quality of flesh and aptitude to fatten. If there is one point more important than another in keeping up your breed of fowls to the proper standard, it is the possession of a really good cock, of a strain wholly different from the breeds he is mated with; a sufficient importance is seldom attached to this essential requirement. Before concluding, I will make a few remarks with respect to ducks. Ducks are, under certain conditions, among the most profitable stock of the poultry yard. Those who possess plenty of marshy ground can keep ducks at little or no cost, as they will, under these conditions, find their own living: but in places that do not afford these advantages ducks are amongst the most ruinous and unprofitable creatures connected with the farmyard, managed as they commonly are. The Aylesbury people, who are perhaps the most successful duck breeders in the world, adopt a system that is almost unknown, certainly unpractised elsewhere. It is said that upwards of £20,000 is annually received in this district alone for the ducklings sent to the London market. The system adopted by these breeders is to bring ducks into the London market at a season when none are to be obtained elsewhere, and they consequently obtain a monopoly, and realise enormous prices. The Aylesbury breed commence to lay a month or six weeks earlier than any other breed, and these eggs, laid open in the depth of winter, are at once set under hens, and, when hatched, the young are hastened to maturity with amazing rapidity. They are kept in a warm, sheltered situation, and fed upon the most nourishing food, and never allowed access to water. Oatmeal and milk form their chief diet, and sometimes more stimulating food is added. These ducks grow, fatten, and feather with rapidity. In less than eight weeks from the time they leave the shell they are in perfect feather, and ready to send to market. In places where ducks have to depend on hand-feeding for their living they can only be kept profitably by bringing them rapidly to maturity and killing them before they take to the water or

begin to lose their first feathers. With these few hints, I beg to conclude, trusting that the remarks I have made may have met with your approval.

The CHAIRMAN expressed the wish that on that occasion he could have addressed them as "ladies and gentlemen," and that their rule could have been so far stretched as to have invited their wives and daughters to that meeting, for he was quite sure they would have obtained very much valuable instruction and information on a subject with which they were better acquainted than the men. He had been accused very recently of a want of gallantry in not inviting the ladies, and he was sure if ever it had been right to break a rule it would have been right on the present occasion. Now if it was true that so much profit could be realised from keeping fowls, he thought the earnest consideration of those who advocate women's rights should be given to the subject, and also the consideration of those who say, and say truly, that there is so little remunerative work for women to do.

Mr. DAVID THOMAS seconded a vote of thanks to the lecturer. The subject on which he had treated and the hints he had given were more matters for discussion than determination. For instance, it was a question whether they should deprive the poor our spare corn for the sake of fowl growing, and also which would be the more profitable of the two. In those countries mentioned by the lecturer as producing great quantities of eggs and poultry, corn could be grown much cheaper than we could grow it, and hence the means in those countries for growing poultry were so much greater than ours, and while they exported we could not spare food out of our limited production for its growth, because what we had to spare we gave to animals which yielded a more profitable return. He merely threw this out as a suggestion, because they should not come to a hasty conclusion. The question, he thought, should first of all presented to the landlord, who should build fowl-houses for their tenants before the latter could pretend to produce poultry on an extensive scale. Then further, they must consider whether their surplus corn could be so profitably employed in fowl rearing as in other ways. He wished them calmly and dispassionately to consider the subject and not jump hastily to conclusions either one way or the other. But he would again point out one reason a great deal of poultry came from France to this country was because corn could be produced cheaper in that country, and being so we could not compete with foreign growers of poultry. In fact it did not appear that we had the foundation of an extensive system of poultry production, because of our limited supply of corn, and because we had to spare could, he thought, be more profitably employed.

The vote of thanks was passed.

Mr. EDWARDS acknowledged the compliment, and referring to the remarks made by Mr. Thomas said that in his estimate of profit he had allowed for the present price of corn, and therefore if he could show that notwithstanding the disadvantage of high prices for food there was a large profit, it was so much in favour of the statement that fowls could be kept profitably. As regarded the profit on pigs, he ventured to say that very few feeders of pigs realised more than ten per cent., whereas on fowls the profit was much larger, as it was often the case that for five shillings' worth of food they produced ten shillings' worth of eggs, thus giving 100 per cent.; it was therefore for the farmer to consider on which he could get the most profit; and if he fairly reckoned the number of eggs he received as compared with the cost of corn, he would find that his fowls, if properly managed and looked after, would yield a very good profit, and such as to make them an important item in farming stock.

Mr. THOMAS, jun., said, after the able manner the subject had been dealt with, especially as regarded the "£ s. d." part of it, he felt that he need not express his opinion upon it. There was also another reason which deterred him, namely, that although he took an interest in fowls, he bred them for exhibition. He could not say that he had realised much profit as a breeder of fancy fowls, but, on the other hand, Mr. Bowen, of Llangorse, who had been very fortunate as a breeder and exhibitor, and had taken a great many silver cups, he had no doubt had cleared over £10. Of course he (Mr. Thomas) kept a debtor and creditor account, and his book, he was happy to say, balanced, but all the profit he had got for four or five years' labour was the value of his stock, which, if put into the market, would probably realise £20. His profits, therefore,

did not amount to much, but he kept his fowls more for amusement and pleasure than for what he could get out of them, and then there was the expectation which others had as well as himself, that in the long run they might make a happy hit and be successful.

Mr. PHILLIPS said he did not agree with the lecturer in his estimate of profits. He confessed that he could not see that 500 per cent.

Mr. EDWARDS: I did not say anything about 500 per cent.

Mr. PHILLIPS resumed by saying that he held in his hand an advertisement which spoke of that amount having been realised, and he thought the lecturer had quoted from it. He also differed from the lecturer as to the cost of keeping; he did not think it could be done for 1½d. per week.

Mr. EDWARDS: I said 1½d. per week.

Mr. PHILLIPS: Very well, I think it can't be done under 2d. a week, if you have to buy corn, and poor people will have to do that if they are to breed poultry. Then, with regard to manure, he could not make any profit out of it; he had tried to do so, but it was a failure; the fact was it dried too soon. Respecting the breeds, Mr. Edwards had advised the crossing of a Brahma cock with a Dorking hen, but he should recommend them to try the Dorking cock with the Brahma hen. He had tried both, and from his experience he was sure they would be more benefited by the latter cross than the former. In his opinion, too, the silver-pencilled Hamburg was a better egg producer than the golden Hamburg. Still he did not think they could expect as many as 220 eggs from these fowls, as the average for each per year; rather, he thought, about 150 would be the actual number. For they would recollect that although Hamburgs were good layers they were bad moulters, and, taking that and other things into account, he believed the number he had stated would be found to be correct. But he quite agreed with the lecturer as to the advice he had given them to get the best cock they could get hold of for breeding purposes, and also for frequent changes so as to prevent the custom which now prevailed of breeding in-and-in. In that respect he did not think they could possibly be worse than they now were in Wales, and that any change he thought must be for the better. The birds had been bred in-and-in to such an extent that they were positively not fit to look at, and scarcely worth their keep. Towards improving their stock, he advised that they should kill off all those they did not like, and of those that remained they should keep one cock in proportion to three hens and then breed from their eggs. There could be no doubt, he believed, that the old game breed was indigenous to the soil of England, and if they put a game cock to Dorking hens what they would lose in other respects would be gained in flavour. He

next alluded to the growing practice of adding a show for poultry to agricultural shows, and he was convinced, according to present rules and arrangements at these shows, that they often did a good deal of harm. For example, to show what he meant, he had been judge at many shows, and often the poultry exhibited was not worth a prize, but the committee insisted that a prize should be given, and the fortunate winner, however bad his bird might be, was perfectly content with it, because it was adjudged a prize, and went home and bred from it. He remembered one instance in particular, at a show not fifty miles from Brecon, where he acted as judge at which there was a class for the best three birds for farmyard purposes. It was a very proper class, but there were not more than three pens, and even those were all equally bad. In an instance like that they would agree that the prize should be withheld, as also in any instance where the judge did not think there was sufficient merit. He also mentioned another show of poultry, held not thirty miles from Brecon, and which he added was so generally bad that he regarded it as a perfect farce, and told the managers not to send for him again to such a sorry exhibition. Towards improving their breeds, they would find that the first expense would be the least, but that was a fact which was not generally understood. On the contrary, he found that purchasers who came to him for a cock nearly always preferred the cheapest bird, because they thought it would do. But there could not be a greater mistake, for it was the fact that a bird at 2s. would often be cheaper than another at half the price.

Mr. THOMAS, jun., supported Mr. Phillips in his estimate for keep, and instanced that an experiment he had tried with a number of Coehins, which were the laziest of all fowls, in which they would not find their food for themselves, and the result was that they cost him exactly 1½d. per week.

The Rev. J. J. EVANS said he agreed with the lecturer that for table purposes Brahmans paid the best as they were of speedy growth, and if killed as soon as full grown they were profitable, but if kept after that time of course the profit was reduced. His experience was that they should not be kept after five, six, or seven months, at the end of which time his birds, according to what his tradesman had told him, were as large as turkeys, and in fact he understood that purchasers had denied the tradesman in question when he said they were fowls by saying that they were turkeys, and he, being quite content, sold them as such.

Mr. OVERTON remarked that, in common with others, he had tried his hand at keeping poultry, but had sustained a loss thereby. He now thought his fowls and poultry in general required to have more attention paid to them, and was satisfied that in that case they might be made much more profitable than at present.

DORCHESTER FARMERS' CLUB.

THE HOLKHAM LEASE.

At the last monthly meeting Mr. J. G. Homer, of Martinstown, the President, chose for his subject the Holkham Lease.

Mr. HOMER, said the lease itself was in print before them. He should merely go through the clauses *seriatim*, stating, as chairman of the Club, his own opinions thereon. These, perhaps, were at variance with the views embodied in the lease; still looking through it they were bound in some measure to come to a conclusion on the point as to whether it was adapted to the Dorsetshire system of farming or not. He did not mean to say they were to take it as a pattern for the leases of the county; still it might convey to them a few suggestions worthy of consideration, while, on the other hand, some of the terms and conditions set forth might not be quite in accordance with their own views as to what a lease should be. They had to consider whether the terms were fair as between landlord and tenant. The opening clause of the document provides that "The tenancy is to be for twenty years, commencing on the 11th day of October . . . but to be terminable at the end of sixteen years at the request of the tenant, with the consent of the

landlord; with the intention that the landlord shall then, if he think fit, grant a new lease from the end of the sixteenth year, at the old rent for the first four years of the new term, and for the remainder of the term at the rent that may then be agreed upon." Than this he had never seen a better clause put into a lease; nothing, he thought, could be fairer. While a yearly or even a seven years' lease was comparatively good for nothing, one for twenty years, as proposed by Lord Leicester, would enable the tenant to freely invest his capital in farming, and to cultivate the land on a better system than he would adopt if the holding were let for a shorter term. The first clause, then, he took to be satisfactory; indeed essential to good farming. Agriculture, he contended, could be carried on to better advantage, not only to landlord and tenant, but also the community at large, if the whole of the farms were let under leases of twenty years instead of for shorter terms. According to clause II, the tenant is "to reside in the farm-house, and not to assign, underlet, or part with the farm-house, or any part of the farm, without the previous consent in writing of the landlord or his agent." Upon this he should make no observations

whatever, because he considered it to be perfectly right—to be in accordance with their own views. The first part of clause III. states that the rent “is to become due and be payable by two equal half-yearly payments—namely, on the 6th April and 11th October in each year (except the last half-year’s rent, which shall become due and be payable on the 2nd August next before the termination of the tenancy), clear of all present and future rates, taxes, and deductions whatever, except the tithe-rent charge, land-tax, quit-rents, and landlord’s property tax.” He supposed that the provision made as to the time of paying the last half-year’s rent was made for the security of the landlord, no doubt there being entertained the idea that by the time the tenancy terminated all the stock might be disposed of. Then “the tenant is also to pay £5 per centum per annum on any sum or sums of money expended by the landlord in altering or erecting buildings at the request of tenant, after the works agreed to be done at the commencement of the tenancy are completed; he is also to pay £5 per centum per annum on any sum or sums of money expended by the landlord in draining.” The interest he took to be all very well; there could be no objection to it. The clause thus concludes: “The payment for buildings is to commence from the 11th day of October next, after the completion of the work, and the payment for draining from the 11th day of October next before the completion; and both the said annual sums shall become due, and continue payable as rent, during the remainder of the term, on the same days as the original rent is payable, and be subject to the same conditions.” He explained what he understood to be the meaning of this, and then read clause IV., which says: “The tenant before entering upon the occupation of the farm is to pay to the landlord such a sum of money as the hay, turnips, mangel-wurzel, and muck left upon the farm, and grown and made thereon during the then present year, shall be adjudged to be worth for consumption on the farm, the amount to be determined by arbitration, as hereinafter provided, and also the amount that has been expended for grass-seeds sown on the farm in the same year, and 2d. per acre for sowing the same. At the end of the tenancy the tenant is to leave in the hands of the landlord all the hay, turnips, and mangel-wurzel which shall be grown and produced on the farm in the last year, being paid for the same by arbitration.” This clause would, he hoped, receive the consideration of the Club. He observed the prevailing practice in Dorset and Wilts particularly was that the tillages, instead of the crops, should be paid for. His own opinion was that the clause was perfectly wrong, out of all character; he believed that the plan adopted in the counties named, also in Hants, was far preferable, the out-going tenant being paid for all tillages and all manure. There was only one provision he should like to introduce into the clause, that the in-coming tenant should be at liberty to direct the out-going tenant as to what tillages and what artificial manures he should put upon the land; the latter doing all the labour nothing would be left at the end of the tenancy to be put before the arbitrators but the work done upon the land; the out-going tenant would be paid for his labour and nothing more. He thought that payment for tillages, artificial manure, and other expenses incurred by the out-going tenant was nothing but fair as between him and the in-coming tenant. The value of crops, such as turnips, was so uncertain that it was impossible to set down any rule by which compensation for labour done would be secured. The clause was, he considered, very essential; but he thought that payment for tillages was preferable to paying for crops. To clause V., which provides that the tenant shall provide certain horse labour, &c., he did not see very much objection. The next runs thus: “The tenant is to cultivate and manage the farm during the first 16 years of the term according to his own judgment, and to have full power during such time to dispose of all or any portion of the produce of the farm by sale or otherwise. During the last four years the tenant shall bring the arable lands into the four-course system of husbandry practised in Norfolk” &c. This he considered to be very right in a long lease. He thought that for the good of agriculture and the maintenance of the estate, the clause, as far as it went, was perfectly right; but he took exception to the latter part of the clause, which lays down that the tenant “is not to suffer any hemp, mustard, coleseed, nor any clover, trefoil, or other artificial grass to stand or grow for a crop of seed in the last four years of

the term.” So that even growing clover to seed the tenant’s own farm is prohibited. He suggested that if the words “only for his own use” were introduced the clause would be perfect. That the tenant should be obliged not to grow anything in the shape of seed for himself was objectionable. The next clause—a rather remarkable one he thought—provides that the tenant is effectually to destroy all rabbits, moles, and rats upon every part of the farm; further he is to deliver one good fat turkey at Holkham House in the month of December in every year. He is also to do a certain number of days’ work of four horses, with the necessary waggons or carts, and drivers as may be required, to any place within the distance of ten miles from the farm in every year without allowance. Mr. Homer observed that the finding of horse labour and straw for the landlord was a matter of pure agreement, and would influence the rent; every tenant on taking a farm would certainly make some calculation on the point. Clauses VIII. and IX. did not call for much comment by the lecturer, but the subsequent one he looked upon as very extraordinary, and therefore he had a good deal to say about it. Clause X. reserves to the landlord “the power at any time during the first 16 years of the term, by notice in writing, to require that the arable lands shall be brought into the four-course system within four years from the date of such notice.” This, he submitted, was virtually abrogating a previous clause. Clause XI. he set down as being rather one-sided, and in criticising the rest of the paragraphs in this long lease, the same remark was occasionally repeated. By Clause XVI. the landlord reserves the exclusive right, for himself, his friends, companions, and servants, of hunting, shooting, fishing, fowling, and (subject to the liberty of the tenant, between the 1st day of November and the 1st day of March in every year, to course the hares by means of greyhounds, but not otherwise) of coursing and sporting upon the farms and premises. The next, which refers to rents in arrear, Mr. HAWKINS observed, appeared to have been inserted by a lawyer, and the President added, “Yes, it appears to be a capital lawyer’s lease.” This model document—which the pressure of other reports prevents our reprinting at length—extends to 21 clauses, some of which, when read by Mr. Homer and the subject of his running comment, caused no small amount of amusement. We regret having been compelled to summarise the President’s practical and interesting remarks.

The VICE-PRESIDENT, Mr. Genge, thought that the Chairman had thoroughly exhausted the subject, and that it was very interesting to know a little of Norfolk customs. The lease might not suit Dorsetshire; but emanating from such a man as Lord Leicester, who in drawing up the document had been assisted by some of the best tenants in the country, it was, he thought, deserving of some respect. He reminded the Club that his lordship is a descendant of the great Mr. Coke, to whom the agriculturists of this country are very much indebted. Criticising several of the clauses he remarked that the tenth to which objection had been raised because it abrogates, as alleged, a previous provision, was made for a bad tenant and not a good one. He thought that if the tenant did not act in a good husbandlike manner, the landlord would, on finding this out, be justified in stepping in and requiring that the arable lands be brought into the four-course system, which was the common course of the county. A great many of the clauses thought to be objectionable would no doubt be found in the old or lawyers’ leases, and were common enough. The President’s remarks he considered to be very just, especially those with regard to the first clause. Respecting the payment for crops very often a good deal of injustice was done. As to the growing of seed to which the President had referred, it would not be of great consequence, because the quantity would not be much. With regard to providing straw for the landlord, he himself should prefer the system adopted by Lord Portman, who required a great deal of straw for his stables; his lordship paid a certain price in bone-dust or linseed-cake—the tenant should certainly be paid an equivalent; his produce should not be taken for nothing. Mr. Genge suggested that if Dorsetshire farmers had to draw up a lease it would be somewhat favourable to themselves.

Mr. CHAPMAN SAUNDERS said the provision that land should not be sown with a corn crop for more than two years in succession was not, in his opinion, at all objectionable. The proposal to pay for tillages rather than valuing the crops met his approval. He did not see any objection to

paying a fair interest for money spent upon farm improvements.

Mr. T. A. HOMER suggested that the Earl of Leicester had a wonderfully good lot of tenants, and that the land was let very cheap. Regarding the payment of the last half-year's rent he thought there would be some difficulty in getting it

before due. In his opinion the clauses were too numerous and complicated; with many he agreed, but others he could not endorse.

Mr. Homer was thanked for the manner in which he had brought forward the subject, and the proceedings ended.

LANDLORD, TENANT, AND LABOURER IN CORNWALL.

At the dinner after the Roseland ploughing match,

Mr. OLVER said whoever had travelled throughout that district must have been struck with the great improvement which had taken place in agricultural work, and more particularly in ploughing, since the establishment of the Society; indeed, all kinds of agricultural improvement were stimulated by it. But what was of still greater importance was the opportunity the Society afforded of bringing together at these meetings all classes of the community—landlords, tenants, and labourers—and he believed there never was a time when their united efforts were more required than now, to enable them to compete with the foreigner and to bear the heavy taxation which they were called upon to pay. Although the improvement in the ploughing, as he had said, was great indeed, there was still room to advance, for good ploughing was of great value. When land was well ploughed it required much less after preparation for seed, and he believed there was no drilling equal to that which was performed by distributing the seed upon well-ploughed land. The improvement in ploughing, however, could not be wondered at, inasmuch as there had been such vast improvement in ploughs, without which it would have been impossible for any men to have performed the work which he had seen that day. It made him proud of his county when travelling about the country he saw there was no county in England, considering the nature of the soil, in which the land was so well ploughed as in Cornwall; and he was also prepared to say that no other county, generally speaking, had such good ploughs. He had seen counties where they still used antiquated ploughs such as might have come out of the Ark—and this in the immediate neighbourhood of some of the great agricultural implement manufactories. Therefore, he was not proud of his county without reason. He might say, too, that they had many local plough makers who were a credit to the county—and there was no doubt such men had been greatly encouraged in their efforts by this and other similar societies. He might mention Collet, in their own district, who had made great progress, particularly in the turnwrest plough. By this Society the labourers were much encouraged and had great opportunity for improvement, and therefore if they did not improve they must be dull indeed. He thought the object the Society had in view of encouraging the labourers was a most commendable one, and he was pleased to know that their exertions were not without their reward, for he believed the labourers of Cornwall were not behind those of any part of England in skill and intelligence. They had lately heard a good deal of strikes among the labourers in other parts of the country, and he was glad to see that the employers were generally yielding to reasonable demands, and although there had been no strike amongst the labourers in this locality, it might still be well to consider their position, and ask themselves if they were fairly paid; if, indeed, they were as well paid as labourers in other parts of the country. He was himself persuaded that they were. In many parts of England, where it was supposed the labourers got higher wages than in Cornwall, they were expected to work two hours a day longer than here. It was true they received apparently higher wages, but in comparing their position with that of Cornish labourers, it must be remembered that in the north of England labourers had to pay for many things which were here looked upon as privileges, and which, when fairly valued, brought their rate of wages quite up to the highest scale paid anywhere in the country. He would illustrate this by the case of his own men—and he knew many of his neighbours paid their men just as he did. He paid those men who looked after the cattle 12s. per week regularly. In addition to that wages they had a house to live in, rent free, and a garden manured for them, for which, in other parts of England, they would

have to pay at least £4 a-year. He wished to impress upon those labourers who might hear or read of the wages movement elsewhere, that the privileges they had in Cornwall were valuable, and must not be overlooked in comparing their wages with that obtained elsewhere. He also paid his men for hay and corn harvest £1 extra, which, with the £1 for house and garden, made an extra £3 per year, or 3s. per week. This brought their wages to 15s. a week. But that was not all; they got their wheat at 6s. per bushel, and many of them had as much as three bushel per month. That, with turnips, cabbages, &c., was equal at least to another shilling per week, which brought their weekly wages to 16s., and in no part of England were labourers better paid, though they had to work two hours a day more than Cornish labourers. But there was still another advantage—his men lived upon the farm, had scarcely any distance to walk, and could attend their meals regularly with their families; this he considered was worth to them at least another 1s. per week, as compared with men who lived in a town or village a mile or two, or perhaps more, from their work. Nevertheless, if the price of the necessaries of life were to continue to advance in price, or even to remain as now, he should be glad to pay his men even higher wages. But otherwise he considered that agriculturists were not in a position to increase their labour bill, for if it were to be much increased without a corresponding increase in the value of produce, the breadth of land under cultivation would have to be diminished. He was not an advocate for tutwork for labourers, because he thought such work was generally slighted. He preferred, in turnip hoeing and such work, to give his men an extra shilling a day. He saw that the Society gave prizes for faggoting; but they should have been called prizes for binding up wood, for what he saw done in the district was nothing else than a few sticks thrown together and tied in a bundle. He had heard of a magpie carrying off a faggot to make its nest with. He would not go so far as to say that a magpie could carry off one of the faggots to which he alluded, but he was quite sure that if two of those sagacious birds were to agree together they might take it to the top of the highest tree in the neighbourhood. Cornish labourers, like others, consisted of good, bad, and indifferent, but unfortunately the indifferent and the bad expected the same wages as the good, and that was a point which required reform; they ought to pay men according to their ability. His men, to whom he paid the wages of which he had spoken, were men who could do anything upon a farm. They were men, too, who belonged to a benefit society (the Foresters), thereby making provision for themselves and families in the time of sickness, and also securing a provision for their families in case they should themselves be removed by death. Such men as those deserved all the assistance and encouragement which the farmer could give them. He ought to mention here that labourers who did not attend upon cattle were paid by him 2s. a week less than those who did. It had been observed by the chairman that agriculture had become a science. He was not one of those who thought young farmers should receive a scientific education, still he thought that they ought to be taught such a knowledge of scientific principles as would enable them to read, understand, and apply the writings of men of deep research who devoted their lives to scientific investigation. Of course, under the present state of things it was the duty of agriculturists who wished to keep pace with the times to introduce the most improved machinery. At the same time there was much said about the advantages of machinery which was not justified by the result. If taken into consideration the first outlay and the cost of maintenance, he questioned whether labour cost was at all diminished by them; indeed, he questioned if 20 years ago corn was not thrashed cheaper with

the deal than it was now by means of steam machines. As regarded the tenure of land, of course a good understanding between landlord and tenant was of great value, but they wanted liberal leases, and the entire abrogation of those antiquated restrictions which curtailed the freedom of the farmer in the management of his estate. He was glad to find the chairman had set a good example in that respect. He (Mr. Olver) was recently in the eastern part of the county, and whilst there he never heard a gentleman spoken of in such high terms as their chairman for the manner in which he had gone amongst his tenants and endeavoured to carry out everything which would be beneficial to them and to promote harmony and goodwill. Another great want of the farmers was practical land agents. On this subject he could not do better than read some remarks made in the *Mark Lane Express* by the chairman of the Warwickshire Chamber of Agriculture, with which he fully agreed. Mr. Ford, the gentleman to whom he alluded, said: "I sincerely believe that landlords are anxiously and heartily desirous of doing justice to their tenants, but I fear they are not sufficiently acquainted with their wants, and leave too much to their agents, who, as a rule, are not better informed than themselves. But how can it be otherwise when we see, perhaps, a London solicitor deputed to manage an estate lying hundreds of miles away, and about the management of which he is thoroughly ignorant; or some head clerk or foreman promoted, or a broken-down old gentleman, or a poor relative or friend, or a retired officer who has spent all his life in India, suddenly chosen to manage a large property about which not one of them understand any more than a full

private from a chosen regiment of the Horse Marines? If noblemen and gentlemen would exercise a little more discretion in their selection of men for the management of their estates, we should not so often see or hear of those disagreements between landlord and tenant, which frequently bring—however unjustly—the former into disrepute. I know the position of the British farmer is neither one of satisfaction or repose. He sleeps in no more security than did Damocles of old; and the suspended sword, in the shape of a six months' notice no quit, is perpetually hanging over his head, threatening every moment to fall and pierce him through—to confiscate his property, to scatter to the four winds of heaven the endearments, the associations, and loved and cherished hopes and memories of long and laborious years of anxious toil and active energy. I say these things cannot, they must not, last any longer; the worn-out system of annual tenure, and the old stereotyped forms of agreement, must be swept away; they are not consistent with any sound recognised principle of political economy, they are not in accordance with the spirit of the times, or the general advancement of the knowledge and intelligence which permeates all classes. Farming is no longer what it was—a primitive occupation—nor is it an antiquated traditional art capable of being transmitted from father to son, but it is now become a modern business, requiring much deep thought and scientific study to carry it on profitably and successfully. Agriculture, indeed, is now become the wisest of the sciences, for it embraces or touches up problems from the constitution of soils to the laws of life."

THE CENTRAL CHAMBER OF AGRICULTURE.

A Council Meeting was held on Tuesday, March 5, at the Salisbury Hotel, the President of the Council, Mr. Henage, in the chair.

Letters were read acknowledging the receipt of the congratulatory addresses agreed to at the last meeting of the Council in reference to the recovery of His Royal Highness the Prince of Wales.

A letter was read from Mr. Gladstone, through his secretary, Mr. Gordon, acknowledging the resolution of the Council on the subject of the Contagious Diseases of Animals Act, and stating that it had been communicated to Mr. Forster. A letter was read from the Chancellor of the Exchequer, through his secretary, acknowledging the receipt of a copy of the resolution of the Council in reference to the Malt-tax; and a letter from Mr. Stansfeld acknowledging the receipt of the resolution of the Council relating to local taxation. A letter was read from Col. Barttelot, M.P., to the effect that he had carefully considered the resolution of the last meeting with regard to the malt tax, and would consult his friends in the House of Commons as to the best time for introducing the subject.

Mr. G. F. MUNTZ then proposed the following resolution, standing in his name on the agenda paper: "That a general meeting of members of the Central Chamber be convened for Tuesday, May 7th, at which members of Associated Chambers shall be invited to attend; the subjects for consideration to be 'Local Taxation,' 'Sanitary Reform,' and 'The Financial Propositions of the Government as affecting Agricultural Interests;'¹ that a dinner be held on the same day; and that the May Council Meeting be held on Wednesday, the 8th, instead of Tuesday, the 7th of May." He stated that the first object of that resolution was to afford subscription members of the Chamber, whose only privilege at present was the payment of a guinea subscription, an opportunity of taking some part in the proceedings on the occasion referred to. A general meeting was deliberative, not executive; and it had been suggested that the meeting of the Council should in that instance follow the deliberative meeting, in order that some action might take place on the resolutions adopted. It was proposed that a dinner should take place on the evening of Tuesday.

The resolution was seconded by Mr. Caldecott and adopted.

Mr. G. F. MUNTZ thereupon proposed a suspension of one of the rules for the purpose of enabling the members of Associated Chambers to vote at the meeting in May; but no notice

having been given of the proposal, it was, at the instance of Sir Michael Beach, M.P., postponed till the Council meeting in April.

Sir MICHAEL BEACH then moved "That the Council Meeting on April 2nd be held *pro forma*, and adjourned till Tuesday, April 9th," explaining that this resolution arose from the fact that the first Tuesday in April would occur in Easter week, and when many members of Parliament would be taking a holiday.

Mr. GENCE ANDREWS proposed that the meeting should be held on Tuesday, the 16th.

Mr. JOHN BROWN thought it would be very inconvenient to alter the day at all, as many members of that Chamber belonged to the Farmers' Club and would perhaps come up to London to attend its discussion meeting on the first Monday in April.

Sir G. JENKINSON, M.P., hoped that that Council would not always think it necessary to be guided by the rules of the Farmers' Club, as the constitution of the two bodies differed. That Council was anxious to promote legislation for the benefit of the agricultural classes; and if it were to hold a meeting on a day when members of Parliament would be out of town simply because the Farmers' Club had a meeting the night before, that would go very far to weaken the authority and prestige of the Chamber of Agriculture. He did hope that they would keep as distinct as possible. The Farmers' Club met on a certain night for discussion, and one of its regulations was that it never passed any resolution or took any action upon any discussion that occurred. That was a fundamental rule of the Farmers' Club (Mr. G. Smythies: "Decidedly not"). On the other hand, that Council met to pass resolutions, and used its best endeavours to get such measures passed as were required. Further, he would remark that Easter Monday and Easter Tuesday were generally days for holding parish vestries. He should be happy to second the proposal that the meeting should be adjourned for a fortnight, and the more so because that would allow time for the members of the Farmers' Club to come up to London again.

Mr. C. S. READ, M.P., said he must dissent from Sir George Jenkinson's statement that the Farmers' Club did not take action upon any matter which it discussed (Hear, hear). For example, it took action with regard to the colt and filly licence; and it was no doubt owing in a very great degree to the representations made by the Farmers' Club that

the Chancellor of the Exchequer made a declaration the other night to the effect that the Government did not intend to enforce the licence in cases in which the animals had been stocked on the farm (Hear, hear).

It was then resolved that the April meeting should be held on Tuesday the 16th.

Sir M. LOPES, M.P., on rising to present the report of the Local Taxation Committee, said, with manifest emotion, that he hoped he might be allowed to take that opportunity of expressing his warmest and most sincere acknowledgments for the kind expressions of the members of the Council on the last occasion of their meeting. He then read the following Report:

In presenting their report, your committee regret to observe, from the absence of all mention of local taxation in the speech from the throne, that her Majesty's Ministers are not prepared to deal with rating reform, or redeem their pledges as to early legislation. The reply given on the 29th of February to the question put by Sir George Jenkinson is a further indication that they have no intention of proposing any general measure of redress. *Militia*: It is, however, a source of great gratification to your committee that the charges for militia, to which they have so often directed attention, have at length been accepted by the Government as imperial and not local obligations. While they are glad to be able to congratulate ratepayers on their relief from one at least of their national burdens, they desire to acknowledge the complete and satisfactory way in which the Government have dealt with this especial grievance in effecting the transfer. They would point, however, to the fact that, but for the remonstrances which your committee have repeatedly urged, there is every reason to believe that a large proportion of the *three and a-half millions* now mentioned as required by Mr. Cardwell would, according to the Government Bill of last session, be saddled on the rates. *Chairman's Motion*: In pursuance of the policy indicated in the last report, and approved of by the Council, the Chairman of your committee took the earliest possible opportunity of giving notice of the resolution which it is his intention to move in the House of Commons. Although he has bailed for precedence on every Tuesday in the session, he has been unfortunately unsuccessful in obtaining as yet so favourable a place on the notice-paper as would warrant the bringing on a debate of such interest and importance as this motion would necessarily provoke. It is also the Chairman's intention to move the resolution which stands in his name on the disallowances by the Treasury of the costs of criminal prosecutions, upon Friday, the 15th of March. *Public Health*: Very important sanitary legislation is likely to occupy a large share of the attention of Parliament. Your committee desire to express their regret that a reform of Local Taxation should not have preceded the introduction of a Health Bill, which, if passed, must of necessity aggravate the injustice already complained of. Such a course would have secured the co-operation of ratepayers, and disarmed the opposition which the present unsatisfactory relations between imperial and local taxation compels them reluctantly to offer. The great value of a complete, simple, and consolidated code of regulations for the public health has already been admitted by your committee, and they wish it to be clearly understood how willingly they would have concurred in considering such legislation, provided a satisfactory revision of the present incidence of rating had preceded it. The opposition which they now feel bound to offer to these contemplated measures is thus forced upon them by the persistent refusal of the Government to redress the grievances under which ratepayers labour. Three sanitary measures have been introduced; one of these, brought forward by Sir H. Selwin Ebbatson, refers to rural districts only; one is introduced by the Government; and the remaining bill is the consolidating statute proposed last session by Sir Charles Adderley, and which has already been carefully analysed by your committee in their December report. The delay which has occurred in the printing of the Government measure has precluded a further knowledge of it being obtained than may be gathered from Mr. Stansfeld's speech. Briefly, the main points of the Government scheme appear to be the compulsory formation of a single local sanitary authority in every district, the charging of these authorities with the duties and responsibilities (no longer permissive merely) contained in the various sanitary statutes now

existent, and the vesting in a central authority the consequent discretion and control. In addition to these objects, Mr. Stansfeld intimated that it was intended to confer new powers on the sanitary authorities with regard to the provision and purity of water-supply, and the inspection of the interior of dwelling-houses. It will be observed that Mr. Stansfeld's measure differs materially from Sir C. Adderley's in attempting no consolidation of existing laws; and it appears to your committee that should their strong preliminary objection to all such legislation in the present state of local finance be overcome, the consolidating measure of Sir C. Adderley should be preferred to that of the Government. Their reasons for this preference are that in Sir C. Adderley's bill the whole of the duties and powers of local authorities and the limits of the control of the central authority are distinctly specified and readily ascertainable, whereas in the Government measure no idea can be formed of the position and responsibilities of the local and central administrations without a perplexing search over a large portion of the statute book. Besides this it would appear that the larger measure will not only be more susceptible of amelioration in committee, but will afford a fair opportunity of raising the most important question of the relation in which local and central authorities are to stand to one another so as to secure on the one hand the necessary comprehensiveness of system and skilful scientific guidance which is requisite, and yet on the other hand to avoid that excessive centralization which threatens to degrade the new local authorities. On the question, too, of providing the required funds Mr. Stansfeld's measure appears to be intentionally silent, whereas in a consolidating statute this subject must receive the consideration it demands. On this ground your committee prefer Sir C. Adderley's bill, and they strongly reprobate the attempt to facilitate legislation on this subject by ignoring the delicate but vital question from what source the requisite funds are to be raised. The Sanitary Commissioners in their report recommended that the new costs of sanitation should be defrayed from the imperial sources, saying: "This is a matter of imperial importance; and is also in its turn, too likely to be overlooked and neglected if left entirely to local effort, and too likely, also, when neglected, to cause national, and not merely local mischief. In any degree, therefore, in which an amended health law may lead to greater expenditure, by an improved system of inspection, by imposing greater medical supervision and securing further medical aid, by improved registration, or by any other measure not purely or necessarily local in its origin and effect, it seems expedient and just that the localities should receive assistance from the State." Although Sir C. Adderley's bill does not contain this proposition, it is yet, from being founded on the commissioners' report, more open to amendment in this direction than the Government measure. *Election Expenses*: Your committee observe that the Government have refrained, in deference to the very clearly expressed opinion of the House last session, to insert in their Parliamentary and Municipal Elections Bill the proposal of last year to throw the expenses of elections on the rates. Notice has, however, been given by Mr. Fawcett of his intention to renew the attempt to add this additional burden to the present total of local taxation. It will be the duty of your committee to renew their former successful resistance to this proposal, as to every other which entails new charges on the rates, until a complete revision of their incidence has taken place. The suggestion of Mr. McCullagh Torrens that the necessary expenses of elections should be borne in such way as Parliament should direct, but in no case by the rates, may be fairly considered as meeting the views of those who take exception to the present system of imposing these charges on the candidates. *Returns*: The return alluded to in the last report, giving the amount of the expenditure in boroughs on account of police, administration of justice, and lunatics, has never yet been issued. The Home-office has admitted that, with the exception of the last four years, no returns exist to show the amounts of such expenditure, and that such data as can be obtained are far from satisfactory. The state of matters necessitating such an admission as this is another instance of the chaos of local finance to which your committee has directed special attention. Your committee has prepared an abstract from the similar return for counties obtained by the chairman, showing the expenditure under the heads referred to in the several counties during the year 1870. A copy of this table

is presented along with this report, with explanatory notes, from which it will be seen that a repetition of the careless blunders to which attention was called last session has marred the use of an otherwise valuable document. Your committee feel that they cannot too strongly animadvert on the practice of issuing such erroneous returns as official statements—a course the more remarkable, and without justification, when it is observed that precisely the same errors have, in some cases, been repeated as those indicated by the chairman, in the first published statement of the county treasurer, last year, but which were then amended, and were therefore available to the compilers of the present return. *Scotland*: Your committee find also that the returns for Scotland giving the expenditure of the objects named are even more defective, and they suggest that correct returns, in a form similar to that for England and Wales, be moved for, giving the totals under each head both in Scotland and Ireland, so that the whole demand to be made on the Consolidated Fund may be readily ascertained. They are particularly glad to find that the terms of the chairman's motion has elicited approval and support in Scotland. Several Scottish counties have already moved in the matter—Rosshire, Berwickshire, and Fifeshire having been foremost in directing attention to this subject. Your committee are happy to be able to announce that Mr. Heneage, the chairman of the Central Chamber, and Mr. G. F. Muntz have acceded to their request to act on the executive. *Finance*: Your committee submit their annual balance-sheet for the year ending 29th February, 1872, which has been made up after the accounts have been duly audited by the finance committee, and stands as follows:

RECEIPTS.	
Balance from last year, as at 1st March, 1871 ...	£160 5 2
Subscriptions received from 1st March, 1871, to 1st March, 1872	694 1 8
Miscellaneous receipts.....	27 3 1
	£881 9 11
EXPENDITURE.	
Printing Parliamentary papers, stationary, and postage	£261 2 2½
Rent of offices, secretary's salary, and office expenses	288 7 8
Advertising, messengers, and sundries.....	23 0 7
BALANCE.	
On bank account	£306 7 8
In secretary's hands	2 11 9½
	308 19 5½
	£881 9 11

Your committee have to acknowledge some further subscriptions received since the last report.

MASSEY LOPES, Chairman.

Mr. CORRANCE, M.P., in moving the adoption of the Report congratulated the Council that the Government had at last accepted part of its duty in reference to the militia. That was a good earnest of the value of that organisation, and after that it could not be said that they talked without producing any definite result. The result was, indeed, as yet far from being final and complete, but the transference from local to imperial taxation of something like £3,500,000 was by no means unimportant (Hear, hear). With regard to the Government Health Bill he confessed he was placed in a little difficulty. He had been greatly in favour of sanitary legislation, which entailed a certain increase of local rates. He had especially advocated additional medical relief, trusting that it would lead ultimately to a reduction of rates by making it possible to administer them on a sounder principle; and he hoped that as medical aid was already provided out of the imperial exchequer to the extent of not less than half, they would soon be enabled to secure a further contribution of the same kind. He must also congratulate the meeting in connection with the Scotch system of poor relief. In the report of Mr. Cranford's Committee on the Scotch Poor Law there was a complete and ample recognition of the principles advocated in that Chamber, and he wished it would be found practicable for that Council to act in unison with those who held such views.

Mr. H. NEILD, in seconding the resolution, said he hoped the Council would not pass resolutions without doing its

utmost to produce some corresponding vital action with reference to them in the public mind. They had certainly made considerable progress amongst the rate-paying classes of this country during the last three or four years, and he thought the ignoring of that movement by the Government would rather promote than retard their object. There must be no "uncertain sound" in that Chamber on the subject of local taxation (Hear, hear). The Government concession with regard to the militia and one or two other minor matters should by no means check their advocacy of a total change in the incidence of local taxation. It was a firm and admirable principle of the Chamber that every proposal which tended to increase the rates should be resisted until the incidence of taxation had been fairly adjusted; and he hoped their determination on that point would be borne in mind in "another place" (laughter). There seemed now to be something looming before the constituencies of the nation, and it behoved them to show what were their opinions to those for whom they might be called upon to vote at the coming General Election (cheers). Some sound advice was given in that room on the previous evening by an eminent member of Parliament from Scotland (Hear, hear), and he hoped it would spread far and wide (Hear, hear). There must, he repeated, be no uncertain sound on the part of their representatives, either on the subject of local taxation or on that of the malt tax (Hear, hear).

Mr. NEVILLE-GRENVILLE, M.P., expressed a desire for information respecting Sir Massey Lopes's pending motion in the House of Commons.

Mr. GENCE ANDREWS felt that that council and the associations throughout England should do something more than pass resolutions. Up to that moment the Chambers had been met on the front benches of the Liberal party with decided opposition, while there had been on the Conservative benches a coolness which had not encouraged Sir Massey Lopes to introduce the direct question on which that movement was founded. It was well remarked some months ago in the *Saturday Review*, that that question was one which, if it were ever decided, would not be decided by equity, but by votes, and he should like all the Chambers to ascertain who were the members of Parliament that supported, and who were those that did not support, Sir Massey Lopes. He believed that in every county in England it was the general feeling among farmers that they had a just and equitable claim to a revision of the system of local taxation, and was convinced that if the work were set about properly they could turn the scale in any county at a general election. He had observed, not merely among gentlemen on the front benches of the Conservative party, but also among gentlemen behind them, a disposition rather to moderate and cool down the movement originated there for the purpose of destroying the exemption which the money-owners of this country enjoyed with regard to local taxation. With such opposing influences as were found in Parliament from the towns, it was not likely that question would be dealt with effectually until there was a much stronger agitation. It was all very well to pull out one stone there and another here; but, as Mr. Ward Hunt said at the dinner of the Central Chamber last year, the feeling of the House of Commons on that subject depended on a general election. He thought a great deal too much stress was placed by their friends, as well as their opponents, on what was called local self-government. So far as the money expended under the poor-rate assessment was concerned, there was at present only the smallest fraction of local self-government. There might be such government in towns, but there was very little of it in counties.

Mr. T. DUCKHAM concurred in the general sentiments of Mr. Andrews on that subject, but regretted that he should bring forward anything that might be construed into party political feeling ("No, no"). In his opinion, they should guard against approaching a fringe of political feeling in that movement.

Mr. JASPER MORE understood Mr. Andrews to blame both sides of the House of Commons. As there had been different estimates of the relative incidence of local and imperial taxation, it seemed to him very desirable that that question should form the subject of authoritative inquiry, and he believed his hon. friend, Mr. Pell, had challenged such an inquiry. Until something of that kind had been done, it would be impossible to say conclusively who was right and who was wrong.

Mr. G. WHITAKER (Worcestershire) said, although his

county had been praised for subscribing £300 for that movement, he felt that the raising of such a small amount for such a purpose was a disgrace to it. He left other counties to their own representatives. He thought Mr. Andrews hit the right nail on the head in saying, in effect, that their influence must be brought to bear upon members of Parliament. He (Mr. Whitaker) was a Conservative, and had been one all his life, but at the next general election he would vote for no man who did not support a proposal for the revision of local taxation. Talking was of no use. They must take action, and quick action. The other day he paid a rate of £72. Was that to be tolerated? He did not like pledges on the part of candidates, but all candidates knew pretty well what they meant to do, and no one who did not take their view on that question should have his vote.

Major PAGET, M.P., concurred in the opinion that if they wished to succeed in that agitation they must endeavour to get the inhabitants of the cities and boroughs with them. Whatever might be said with regard to self-government, it was very dear to a great many persons, and it was doubtless more deeply rooted in the towns than elsewhere. For them to inscribe on their flag, "Away with local self-government," was not the way, therefore, to obtain the support of the cities and boroughs. Even in counties there still remained with the local magistrates a large amount of control over the police, gaols, asylums, and the salaries and retirements of their officers. In the boards of guardians, too, although the control of the guardians was not supreme, it was important, and he would be sorry to see it withdrawn. He thought they should urge their own principles, without endeavouring to destroy what others held dear.

Mr. HODSHOLL (Kent) believed that without great care they would come to a dead lock. Either that Chamber or the Government of the day, whoever might form it, should be asked to shadow forth some settlement of that question. They had been resolving and re-resolving and passing resolutions for several years without proposing any specific plan. He did not wish to talk party politics there; but, like Mr. Whitaker, at the next general election he would only support candidates who would support them on the question of local taxation. The other day the Lord Advocate for Scotland laid down the proposition that any tax on land which was brought into question ought to be dealt with by continually modifying it according to its own merits. He believed that the Government would be very glad to settle that question as they had others, and only a Minister who was backed by a large majority could make the attempt to settle it.

Mr. R. VARDEN (Worcestershire) said the gist of their complaint was that the rates fell upon only one-sixth or one-seventh of the property of the country; and it seemed to him to follow, as a natural consequence, that without a powerful movement on their part the remaining five-sixths or six-sevenths would always be arrayed against them. But they were making progress towards the conversion of a large portion of those who had been opposed to them; and he believed they could not do that more thoroughly or more soundly than by adopting the policy of Sir Robert Peel in reference to imperial taxation, and extending to local taxation the principle that the profits of production ought to be taxed, and not the means of production. It was about thirty years ago since the first great step towards the reform of imperial taxation was made by removing duties on raw materials, and that change had produced wonderful effects on the industry of the kingdom. Rates levied on workshops and fixed machinery were, however, as much a tax on the productive energies of this kingdom as were duties on raw material, and if that could be fully brought home to the great bulk of manufacturing and commercial men of this kingdom, they would see that they had an interest, not so great indeed, but in the same direction as theirs, in having the means of production freed from taxation, and taxes raised entirely on profits. If the nation was satisfied that Sir Robert Peel's fiscal reform was a proved success—and no doubt that was its conviction—there should be no chuckling at the progress made, for what had been attained was but a foretaste of further successes, and he fully believed that manufacturing and commercial industries had a deep community of interest with themselves on that question (Hear, hear).

Sir G. JENKINSON, M.P., had suggested to Sir Massey Lopes the desirableness of including in his pending

motion in the House of Commons a declaration to the effect that some legislation changing the incidence of local taxation was absolutely necessary. It was said that it was of no use to propose a resolution which you could not carry. He did not admit that; in his opinion it was desirable to have some distinct proposition on that subject which might be referred to at the next general election when they had before them some of those by whom it was negated. To use a sporting phrase, they should try and force the running a little more than they had done.

Mr. C. S. READ, M.P., said, however interesting and useful that discussion might be, it was rather irregular. The only question before them was the adoption of the Report of the Local Taxation Committee; and if the discussion proceeded there would be very little left to be said at the meeting in May (Hear, hear).

Sir M. LOPES said Mr. Neville-Grenville had asked what course he intended to take with regard to the motion which stood in his name. It was only on Tuesday that an independent member had any chance of bringing forward a motion, and he should do his best to secure an early day. With regard to the garbled statistics of the Government, he wished to observe that he had the pleasure of seeing present among them a right hon. friend of his to whom they were indebted for the very best book on Local Taxation that ever emanated from a Government; he referred to Mr. Ward Hunt and the Local Taxation returns presented by him to the House of Commons. As one who took a great interest in the question, he begged them to thank Mr. Hunt for those returns. He was glad to find that 22 parishes of the metropolis were forming a league in reference to Local Taxation; and he might add that their Secretary had endeavoured to create a similar movement at Southampton. One great difficulty in the case was that occupiers were blinded, as it were, by the system of composition, and efforts should be made to show them that in reality they paid taxes in the form of rent. He should be most happy to consult with Sir George Jenkinson as to any alteration which might improve the terms of his motion in the House of Commons (Hear, hear).

Mr. BIDDLE expressed his concurrence in the remarks made with reference to members of Parliament at the next general election.

The Report was then adopted.

On the motion of Mr. Startin, seconded by Mr. Turner, the following resolution was passed: "That, in consequence of the Government 'Public Health Bill' not having been printed and circulated, the Council regret that they cannot discuss such an important measure on its merits, but they protest against any legislation on this or any other subject which will impose additional public burdens upon one description of property only."

Mr. GEORGE WHITAKER (Worcestershire) moved: "That, as it appears that the Government do not intend to introduce any Road Bill this session, and consequently that the cost of repairing turnpike roads on which the Trusts are already or will be discontinued must fall upon local rates, the Council are of opinion that the attention of Parliament should be immediately called to the injustice of any further discontinuance of Trusts until an equitable means of maintaining the roads has been provided." It appeared to him that the present system of abandoning turnpike trusts was most unjust, and that by sanctioning it they would be sanctioning what had a tendency to increase the burdens on land. No doubt hardship was felt by many parties who had to pay tolls and keep their roads in repair; but of two evils the Council should choose the least. Real property had in many districts been saddled with very heavy expenses through the abandonment of turnpike trusts. He had suffered considerably himself; but that was no reason why others should suffer. Mr. Knatchbull-Hugessen, when he did them the honour to attend there three years ago, made a very pretty speech and promised a very considerable measure; but the promise had not been fulfilled. He led them to believe that he was going to propose a comprehensive measure of relief; but instead of affording relief he had gone on disturmpiking from 1869 to the present time. He had gone on passing what he called a "Continuance Act," but what was, in fact, a Discontinuance Act, a number of trusts being excluded and consequently destroyed. The tolls collected in his own county in 1866 amounted to £31,000 a-year, and of that amount £13,000 had since been taken away by Discontinuance Acts. A deputation from Worcester went to Mr.

Bruce on that subject, but all they got from him was the answer that they were no worse off than their neighbours (laughter). In almost every county the process of disturnpiking had been going on rapidly, and the result was a total loss of £195,000 per annum. Under this new system the large timber-merchant, the miller, the coal-owner, and the mine-owner, who wore the roads out a great deal more than farmers, contributed nothing towards their maintenance. In principle tolls were just, and the burden ought not to rest exclusively where it did. It was said that the extension of the area of rating would remedy the evil. What was the result of forming highway districts in Worcestershire? In the district of Redditch the cost of the roads in the four years after the district was formed exceeded by 38 per cent. that in the preceding four years; in the Tenbury district there was an increase of 57½ per cent., in the Upton and Severn districts of 27½. It was a special hardship upon the cottager who kept no horse that he should have to pay so much for what he never used. At first the citizens of Worcester thought it a very good thing to be free from tolls; but they had since found that the roads were not as good as they had been, that the expense of maintenance was very great, and that the management was not as business-like as it used to be.

Mr. YELLAND (West Gloucestershire), in seconding the resolution, said that in his district they paid 1s. 4d. in the pound under the district system already, and it would require 1s. 4d. more to put the roads in good repair. Whereas formerly he used to pay about £1 a year he now paid above £30. The only way in which the road system could be made to work properly was by throwing the cost of maintenance on the whole country.

The CHAIRMAN said he thought it right to remark that although a majority of the Business Committee were in favour of that resolution, there was a large minority against it (Hear, hear).

Sir G. JENKINSON, M.P., opposed the resolution on the ground that it was entirely in a backward direction, and was contrary to resolutions which the Chamber had previously passed on the subject, one of those resolutions being in favour of the total and simultaneous abolishing of all turnpike trusts. He knew some places where as long as the Continuance Act was in operation the trust would never be discontinued (laughter). In one case, although the trust had just taken upon itself a large debt of a neighbouring trust, the moment it was put into the schedule of trusts that were not to be continued the whole debt vanished away. He called that robbery. After all, those who most used turnpike-roads were generally the ratepayers of the district, and while the turnpike trust remained they had to pay rates and tolls also, a large amount—sometimes as much as 40 per cent.—being consumed in expenses which were not repairs. In his opinion their proper course as a Council was to agitate for the total and simultaneous repeal of all trusts, and at the same time to agitate for aid from imperial sources. He would move the following amendment: "That in order to remove the hardship now falling on ratepayers by turnpike trusts expiring in a partial and piecemeal manner, the Legislature ought to provide for the total and simultaneous abolition of all turnpike trusts, and for the classification of roads according to their traffic; and that the maintenance of all main arterial roads should be under county management, and supplemented by a grant from imperial sources." Before sitting down, he would read to the meeting a form of resolution which was something like what he intended to propose—he could not pledge himself to the precise words—in the House of Commons, with a view to future legislation. It was, "That as great hardship and injustice is inflicted on the ratepayers of various parishes by the present system of partial and piecemeal extinction of turnpike trusts, it is incumbent on the Legislature to provide for the immediate and simultaneous extinction of all remaining trusts, and at the same time for a classification of all such trusts and other roads, and to provide for the future maintenance of all highways on an equitable basis."

Mr. D. LONG (Gloucestershire) seconded the amendment.

Mr. NEILD and Mr. HORLEY supported it, the latter saying that he thought the Council should pause and consider the matter seriously before passing such a resolution as that of Mr. Whitaker (Hear, hear).

Col. DYOTT, M.P., wished to state that on the previous Saturday the Staffordshire Chamber passed the following reso-

lution: "That, inasmuch as the repairs of parochial highways now charged wholly upon the rates are a great hardship to owners and occupiers of real estate, it is manifestly unjust that the turnpike roads which form the great lines of through traffic from town to town should also be thrown on the rates, unless the basis of assessment for local taxation is extended to all classes of actual income." As regarded the remedy for this evil, his opinion was that they were getting into a complete fix. They must either allow the roads to get more out of repair than they were now—and they were very much out of repair—or they must submit to an increase of the burden of local taxation. That was the view of the Chamber which he represented, and it desired that the strongest action should be taken on that important subject (Hear, hear).

Mr. GENGE ANDREWS thought they should endeavour to force the Government to introduce the general measure which it promised two years ago.

Mr. C. S. READ, M.P., recommended Mr. Whitaker to withdraw his resolution, and adopt the proposal of Sir George Jenkinson as being the most in accordance with resolutions which the Chamber had passed previously.

Mr. G. F. MUNTZ said Sir George's remedy was one of which they might not all approve.

Mr. WESTOVER (Banbury) also expressed a hope that Mr. Whitaker would not press his resolution.

Sir M. BEACH, M.P., said he could not support either the amendment or the resolution. It was impossible to stand still. Injustice was no doubt inflicted now on certain parishes by the abolition of trusts, but to stop abolition would be to make matters worse (Hear). What was wanted was that all trusts should be abolished; while as regarded the future maintenance of roads, it was not desirable for them to attempt to classify roads or lay down the mode in which the provision for that should be supplemented, whether from imperial sources or in some other way. The idea of classifying roads seemed to him very objectionable. In fact, he did not believe it would be possible to classify them. He did not think commissioners who went round the country for the purpose of ascertaining what roads were and what roads were not of an imperial nature would be able to accomplish the object; and even if they did arrive at a classification, a road which was imperial now might soon cease to be so through the opening of a new railway. He considered the highway district quite large enough for good management, and would regret to see the area extended to counties. He hoped Sir George Jenkinson would consent to the alteration of his amendment by the striking out of what referred to the classification of roads, and the adoption after "trusts" of the following: "Provided that the future maintenance of the roads is not left as a burden on one description of property only."

Mr. T. DUCKHAM hoped that Sir George Jenkinson would adopt the alteration thus suggested, and thereby make the amendment of a more general character than it was then.

After some discussion, in which Mr. Whitaker emphatically repeated his dissent from the views of Sir George Jenkinson, and Mr. Horley and Mr. Genge Andrews expressed their concurrence in the opinion of Sir M. Beach that the classification of roads was altogether impracticable, both the resolution and the amendment were withdrawn; and thereupon the following resolution, proposed by Sir M. BEACH, M.P., and seconded by Mr. HORLEY, was adopted unanimously: "That in order to remove the hardship now falling on ratepayers by turnpike trusts expiring in a partial and piecemeal manner, the Legislature ought to provide for the total and simultaneous abolition of all remaining turnpike trusts; provided that in effecting such abolition the future maintenance of the roads is not left as a burden on one description of property only."

The subjects for discussion at the Council meeting in April will be Sanitary Legislation; Educational Endowments; and Mr. Mundella's Master and Servant (Wages) Bill.

The meeting then separated.

THE ROYAL AGRICULTURAL BENEVOLENT INSTITUTION.—Lord Vernon has accepted an invitation from the Council to preside at the annual dinner on Wednesday, June 5.

WINFRITH FARMERS' CLUB.

PIECE-WORK.

At the last meeting, Mr. Chapman Saunders read a paper on "What extent, and with what mutual advantage, can piece-work be substituted for day-work in agriculture."

Mr. CHAPMAN SAUNDERS said: This subject is not of the ordinary and practical character similar to those with which this club has been accustomed to deal, but it is, at the same time, of a highly interesting nature, since it involves the interest of all classes who are, to a greater or less extent, connected with the soil—the tenant, the labourer, and also the landlord. Money paid in labour which is necessary to carry on a farm well and profitably becomes a somewhat important item; in fact, it is scarcely of less consideration than the rent, seeing the amount has to be expended for this item when paid wholly in money, as in many counties in England, or, as in this and some other adjacent districts, partly in money and partly in kind; but, whichever may be the preferable mode, knowing as I do much which has been written on the condition of the Dorset labourer, and having also had the opportunity, not afforded to all, of visiting other parts of England, I am satisfied that the labourers in this county are as well off generally, and as comfortable in their station, as elsewhere. The value of labour depends, very much like that of everything else, on the law of supply and demand. If the Dorset labourer were, as some would have us believe, in a worse position than those in other parts he would no doubt remove to a distance where he might receive better remuneration, since recent alterations in the law of settlement afford him facilities for shifting. I have known the attempt made (and many of you will substantiate what I say) by men leaving their situations here to receive nominally 5s. or 6s. per week more money in distant places, but after a short time they have been only too glad to return to their former employers. I will not now enter further into this subject. Labour, as I have said, is one of the most important items in the shape of payment to be made out of the farm, and it is likely to increase yearly in consequence of the amount of stock kept on the farm being so much greater than in time past, and the occupier being tempted by a higher price to be obtained for mutton and beef than some years ago. This, as a consequence, leads to the production of a greater amount of green food to sustain that stock, and, as a result of keeping a larger amount of stock, more corn and straw are produced. The labour essential to the carrying out of things in general in accordance with this advancement of agriculture should raise in the minds of most the thought how can all this be best accomplished with mutual advantage to employer and employed—whether day or piece-work should be followed. An acquaintance with every operation of the farm is most essential in order to understand what is a fair amount of work to expect for a fair day's pay, and also to attain a fair knowledge of the quality of work of various kinds. In manufactories most of the labour is paid in the shape of piece-work from a minute subdivision of labour carried forward under close supervision in a limited area; and of course, as the eye and the hand of the mechanic become more and more accustomed to the performance of work of any particular kind with greater ease and despatch, the cost in production is more and more reduced until it obtains a minimum. That this state of things cannot be fully realised in farming pursuits I need not remind you, but still in agriculture, as in other callings, there is a certain method to be acquired by practice—for instance, in the simple process of lifting or carrying any substance or body, and also in various other ways of facilitating the various kinds of ordinary work; therefore, I say, give as much encouragement as you possibly can to ascertain the best method which may be devised of doing what may be required on the farm as well as in the factory at a given time, and with despatch. To do this, why should not the labourer derive a fair remuneration for his interest and extra exertion? Of course, the attendance on stock cannot be carried on entirely in this way, nor the simple tillage of the land, but I believe much may be accomplished which has never been attempted in a general way. Difficulties

will arise at the outset in setting up new practices and modes of payment in this manner. Forbearance for a time on the part of employer and also the employed must be exercised. As in other things, the influence of the weather is often brought to bear; and, for this reason, let me remark that the system of piece-work once adopted the further it becomes extended the better it will be, and the greater the mutual benefit also. Say, for instance, in carting manure by the piece at a price per load—here you have the men employed in filling endeavouring to do the greatest amount of work, and with the least amount of labour, and the least misapplication of it on their part, using the best tools, &c., for the kind of work, the horses employed being kept in motion, and the drivers also; and much more may be done in a given time, especially at a busy season. True, you will say higher wages have to be paid; but what does that matter if the extra money so paid be fairly earned, and perhaps a season saved? If at any hour of the day when those men are employed filling should the horses employed by them be advisedly removed conveniently to other kinds of work from any alteration in the weather, or other reason, they may then spread the manure over the land or be sent to do any other work to which there is an understood fixed price attached. Harvesting operations might also be facilitated in this direction beyond their present limits, as the adoption of the reaping machine has somewhat extensively superseded the hook and the scythe, and many of those formerly employed in cutting the wheat may by some plan secure the crops cut by machine at a price per acre, if not the whole, at least some portion, as circumstances might more or less favour the operations. If in the morning the weather be unfavourable to harvest-work, a few hours, or any uncertain time as it might happen, can be spent in carting and spreading manure over the leys for wheat, which kind of work might be left at any moment for the more important task of harvesting. I consider a good labourer is benefited by the adoption of piece-work, and he generally prefers it, whilst a bad labourer becomes a better one from having to exert himself, in being obliged to become somewhat more self-dependent. Mr. Saunders then read the following extract: At a harvest-home celebration on the estates of the Earl of Cowper, a labourer named Digby, in replying to a toast, made the following remarks: "It was admitted by all persons that we had a most abundant harvest, but there was one drawback, and that was the great scarcity of animal food. A great deal had been said on that subject in the newspapers during the past week, and they were told that the muscles and sinews of their young men could not come to perfection without a certain amount of animal food. Now, he wished to commend that to the notice of employers of labour, some of whom thought it very imprudent for a man to marry when young—in fact, that it was almost a crime for a labourer to do so. Twelve shillings per week was a moderate wage in this part of the country, out of which the labourer had to pay two shillings per week for rent, two shillings for firing, and, supposing he was imprudent enough to be the father of six children, there was just one shilling per week each left for the maintenance of the father, mother, and six children. How, then, was it possible for the labourer to obtain animal food, which they were told was so very necessary for the maintenance of the human frame in the early stages of its development? He did not believe the farmers wished to oppress those beneath them, but he would give them this piece of advice—let those young men who had been imprudent enough to get married and have a family do the piece-work, as far as practicable, and thus have a chance of earning a few extra shillings to supply their children with animal food to keep their souls and bodies together." He continued: On small occupations it is more difficult, and perhaps impossible, to carry piece-work forward to any extent. The consideration of the degree to which the subdivision of labour can be carried on satisfactorily to employers and employed will prove one argument in favour of comparatively good-sized—I should perhaps

say large—farms over small ones, as the more each man has one particular kind of work for which he is more fitted allotted him the more he may be expected to do of it, and the better also. On a small farm, with a comparatively small number of hands employed, one person is frequently called on to do many kinds of work during the day, whilst on a large one each may more easily be engaged at one kind of work in the day, and that one only for which he is most fitted. A good attender of stock is not unfrequently very inefficient at ploughing and other simpler kind of work, and, *vice-versa*, we find sometimes men of great strength, accustomed to, and qualified for, heavy work, do not apply themselves to those kinds of work where brains are of greater service. There is skill in everything. Skill is required in feeding stock, in order to know how to feed and when to feed the animals in charge as circumstances vary; skill in ploughing, and skill in every operation, even in filling a cart—for all these some learning is desirable. It is poor economy to pay too little for any kind of work, but it may be sometimes wrong to pay too much, as it affords a precedent which may prove unsatisfactory afterwards. Some little discretion must therefore be exercised, and knowledge is essential in first adopting piece-work. Perhaps these are some of the reasons for the non-adoption of the system more generally, but I think you will find where piece-work is more the rule the work of the farm is at all times in a fairly forward condition. Again, where labour is scarce, that is, arising from the want of more and better accommodation in the shape of dwellings on the farm—and, I regret to say, there are many such instances yet to be found, although I believe there has been a very decided improvement in this respect of late years—where, as I say, the number of labourers being scarce (not from the scarcity of people to work—on the contrary, labourers are abundant), the system will recommend itself for adoption. Although much of the corn is now reaped by machinery, and thrashed by steam power, and naturally less hands are required than when the flail was more generally used, still it remains that more and more labour is required to develop to the full

extent the capabilities of the soil, for although the population (according to Mr. Mechi, in *The Farmer*, a few weeks back) was, in 1800, 15,000,000, there are now 32,000,000. With this alarming increase, the area of the land remains unchanged, and this is another good reason for making that land as productive as possible. Mr. Mechi, in the paper referred to, also says, "To keep a man on day-work because you don't like to see him earn more money is a narrow-minded and unprofitable mistake." With those sentiments I most fully concur. Plan, arrangement, order, and foresight are essential in carrying out and employing to the best advantage the labour on a farm as well as in a factory or shop. To what extent education will assist or otherwise, I am not prepared to assert, as that will depend on the kind of education which is to be imparted. My opinion is that the education of the labourer should be one fitted to his station, and not beyond it. The thorough knowledge of the "three R's"—reading, writing, and arithmetic—is ample, not forgetting also that such education, whatever it may be, will not be at the expense of the individual, but of the public. I do not object to the amount of education I have stated, as in these days more is needed, and I have frequently found an inconvenience from men being unable to read a simple word. Much more remains to be said on the subject of wages, and the mode of payment. In conclusion, I will only add that I have had some experience, and possibly may have given the subject of piece-work some extra personal attention, extending over several years, but I am perfectly satisfied with the result. In addition to the common practice of hedging, mowing, turnip-hoeing, &c., I cart and spread nearly all the manure on the farm by piece-work, store a large quantity of roots for stock, and prepare them ready for the turnip-cutter; and I think it advisable to further extend the system, believing it will tend to my own advantage, and not less to the well-doing of those whom I employ.

A desultory discussion followed, and the proceedings closed with a vote of thanks to Mr. Saunders.

W O M A N ' S S U F F R A G E .

At a woman's suffrage meeting at Warrington, Mr. P. Rylands, M.P., the chairman, said: "In reference to the rights of women—their personal and property rights—they have a perfect claim to be heard in the House of Commons, because if you take the statute-book of this kingdom you will find that the laws of this country have been made by men, and that whenever it happened that the interests of women came into contact with the interest and the desires of men, the interests of women have been sacrificed to the desires and to the interests of men. I must mention one circumstance showing the indirect effect of women not having the franchise. There is no reason why women should not be farmers, and that the widow of a farmer left in the occupation of a farm should not be allowed to carry on a farm; but in many cases, as soon as a woman has the misfortune to lose her husband who happened to be a farmer, the landlord takes care to get rid of her, simply because she has not a vote. I will state a fact that I have received upon information which I can fully rely, communicated to me by the parties concerned. A gentleman in the neighbourhood of Liverpool took a farm from one of the landowners of Lancashire, in the neighbourhood of Liverpool, and in order to get possession of that farm he gave to the outgoing tenant a very large sum of money. I believe he reckoned that he had given about £1,000 to induce the outgoing tenant to leave the farm. Relying upon his landlord, he proceeded to lay out £2,000 or £3,000 in a manner which could not by any possibility have given him a return for several years. After he had

invested some £4,000 or £5,000 in this property he unfortunately died. I tell you as a matter of fact upon which I have no doubt—and I think I ought to say that the landowner in question belongs to the same political party as myself, and I do not wish to make any political capital out of it—that this landlord actually gave notice to his agent that this poor widow who had lost her husband under these distressing circumstances should leave her farm, and although great representations were made to the landowner that her husband had invested all this money in the expectation that he would receive from it a very considerable return, yet because this poor widow was a woman and had no vote, and could not support the political party this man belonged to, she was turned out of her farm, and the money which her husband had laid out on the farm, expecting no doubt that it would be for his benefit and the benefit of his family, was all sacrificed. I say this is an infamous thing, and certainly it ought to lead us to see that no woman under any circumstances should be placed in that position of disadvantage." At Kettering one of the speakers said: "What they wanted was a Tenant Right, which was not the landlord's wrong, and that, if the tenant were removed by death, his family should have a claim upon the money which was expended by him for any permanent improvement, in proportion to the number of years unexhausted." At Brecon, where the discussion turned on eggs and poultry, the chairman regretted that ladies had not been invited to attend. These are all signs of the times,

TUNBRIDGE WELLS FARMERS' CLUB.

THE BREEDING AND FEEDING OF STOCK.

At a meeting, Mr. John Noakes in the chair, Mr. G. N. ROPER, of Frant, read the following effect:—

It was both safe and wise to assume that the breed of stock generally found in a district was the best fitted for its soil, and that was the object sought by the farmer. Although aware that the present state of stock farming in this neighbourhood was greatly changed by the fact of the railways putting them into easy communication with the great towns and the metropolis, he must, in consideration of this subject, take them back in thought to at least 15 years, when Sussex stock was alone prominent with breeders, and justly so, as they grew and thrived on their native land, and on what he might not inaptly call the hard treatment then customary, as no other breed could. Their size too fitted them for work, and the ox teams on many farms were very useful, especially in clearing the woodlands, while they were kept very cheaply on poor pastures during the grazing season. At that time many herds of Sussex stock were found in this neighbourhood, and these with care and judgment reached great excellence, and had since contributed to the high position the breed had attained to at the Smithfield Club Shows. The cows were not as a rule good milkers, but that was a secondary consideration compared with the production of meat, and the effect which resulted from paying attention to their quality combined with their aptitude to fatten was the production of steers which a little over two years old were worth from £20 and £25 a-head—a speedy and profitable return all would admit. Scarcely any roots were then grown, and the calves had a little bran and ground oats with chaff a short time before and after weaning, and were wintered generally on the pastures with some hay daily. Yearlings fared much the same the first winter, but older beasts were yarded on hay and straw as thrashed from the barns once a day without any artificial food till they were stalled for fattening. He recollected the progeny of some highly-bred Shorthorns being treated thus with Sussex stock, and they degenerated so much that the trial was abandoned. Compared with the present treatment of stock it seemed to him little was done until lately to help nature, and he ventured to suggest, for the sake of discussion, whether the increased cost of feeding resulted in a better return than under the old régime, taking all things into consideration. His practical knowledge of the subject of breeding stock as applied to a distinct and pure breed of stock ceased nearly fifteen years ago, when he sold the herd of Sussex stock on the Bayham Home Farm. This herd was his only for a year, but he had for several years previously been a witness of its rise and progress under his father's care. As he had before remarked, the introduction of the railway caused farmers to turn their attention to dairy farming and the supply of milk to the metropolis. This resulted in a cross breed being substituted for the Sussex on the majority of farms. He was not aware that hitherto much attention had been paid to the breed other than to the size and milking properties of the cows, and he could not help thinking therefore that landowners and large dairy farmers would do well and would render great assistance to breeders by importing into the district some pure-bred bulls, by which means the progeny when reared on their own farms might possess quality and growth enough to become profitable stock. He would now throw out one or two suggestions, and would remark that having determined upon the breed best fitted for their purposes, it would be well to select one or two cows possessing the approved qualities of the herds, and in order that a family likeness might be secured, which was a great feature in the rearing of stock, it should be formed gradually by selecting heifers from good dairies, and correcting faults and deficiencies by the judicious selection of bulls. Having thus disposed of the breeding, he would next refer to the feeding of cattle. His own practice was to give oilcake in small quantities while at grass towards the end of the summer, which was increased generally with the improved state of the animal. He gave roots with chaff in addition once a day when in the yard,

with ground corn or pea meal and a little hay likewise, as he was of opinion that the hay assisted nature in cudding, and, therefore, helped forward the fattening process. Whilst fully appreciating the great value of roots (such as swedes) in the fattening of cattle, he was almost induced to give up the cultivation of them, because he found it was antagonistic to the cultivation of hops, which was of great importance to farmers in this neighbourhood. The root crops and the hops required attention generally at the same time, and there was such an inclination on the part of labourers to work in the hop garden that it was impossible, except at ruinous outlay, to get them to work in the root fields. It had, too, become not uncommon for covered buildings to be furnished for the accommodation of neat stock. He, however, somewhat questioned their utility except in the finishing off of stock for the butcher. Young stock should be treated more naturally to secure hardihood and to resist disease. Once shut up they should remain so to the end, as an unexpected change of weather might, when they were turned out on the pastures, lay the seeds of disease fatal to their well-doing. As regarded sheep, he had a few lambs of the Bayham flock until last year, when he found their keeping during winter on trough food almost if not wholly unprofitable, that he had discontinued the breed and had substituted some Down ewes which he had secured at Lewes Fair, and had fed them on pastures with some chaff and oats during the day, and at night, weather permitting, on swedes. He preferred white turnips before lambing, but as the soil in this district was not altogether suitable for many roots, and the older and more practical farmers doubted whether roots could be grown at the same cost as artificial feeding stuffs, the value of the manure on the land being in many years neutralised by the treading, he fancied that feeding sheep on very thin new laid-down pastures was an improvement—although a slow one—to the herbage. He had such a liking for the Southdowns that he was unable to compare other breeds with them as regards profit, though he feared they were great reutpayers when kept on artificial food, as there was not much growth in them. Perhaps, however, the price they commanded in the market compensated for this. The growth of rape for autumn feeding to save the pasture would be very useful; but in some seasons it would be unfit in most of their fields to sow wheat afterwards.

Mr. J. KIRBY PAIN inquired what Mr. Roper's opinion was as to the best sort of artificial food.

Mr. ROPER replied that he generally left that to his man, to whom he could rely for the effectual carrying out of his wishes, but he confessed that he preferred oilcake to almost every other kind of cake with the addition of roots. At this season of the year one meal of oilcake a day in proportion to the condition of the animal, and if possible a little ground corn in order that the cake might stay in the animal more easily, would be sufficient. In the first instance with lean cattle he would not give more than three or four pounds at the outside; but when the animal was brought to a stage of fitness for the butcher he should allow seven or eight pounds with ground corn, roots, and chaff. He would not deny that he held the old-fashioned prejudice as to the racking up at night with a little handful of hay. The herdmen (some of them) told him that animals were likely to lose their cud if fed entirely on shortly-cut chaff, and therefore in order to guard against that he gave with the cake, &c., a little handful of hay so that they might save their cudding, which, as everybody knew, must be right.

Mr. WILLIAM DELVES said he recollected a good many years ago he used to be on intimate terms with the late Mr. Roper, and also another gentleman, familiar to most of those present, but perhaps not all—Mr. John Turner, of Somerford; he meant the one who used to be called old John Turner, and not the one who had left a short time ago for Suffolk. The system of feeding adopted by these gentlemen was widely different, and yet the success of both of them was very great.

Mr. Turner would have his stock well fed, both at morning and night (that meant his fat stock), "so that," to use his own expression, "they might fill their bellies, and then lie down and chew their cud." Mr. Roper also fed with great success, and upon the system of feeding which he adopted—corn or cake and ground corn once a day [Mr. ROPER: Three times], and racking up at night, so that they had got but very little time without they were eating—he should like to ask his friend, Mr. Roper, whether of late years he had tried one or both these systems, or whether he still adhered to his late father's system of frequent feeding. Whilst upon his legs, he (Mr. Delves) would take the opportunity of saying he very well recollected the circumstance that brought the Sussex stock into great public notoriety, and which had reflected such great credit on their own neighbourhood, nothing being better adapted for it than a good Sussex herd. Lord Althorp, who afterwards became Earl Spencer, was the great introducer of the Shorthorn breed in England, and his lordship was the first to speak of them as being superior to any other breed. Mr. Selmes gave Lord Althorp a challenge that he would produce a hundred Sussex beasts to show against a hundred Shorthorns. The challenge was accepted, and the show took place. He believed, in one respect, Mr. Selmes was easily (in the opinion of the judges) beaten, and for this reason—to make up his hundred, he selected twenty pairs of working oxen. Of course, when he showed twenty pairs of working oxen against forty of Lord Althorp's steers, which were, perhaps, ready to go to Smithfield, it was not a fair show; still, the Sussex stock was very much observed at that time, and very much admired also. Such a number of bullocks being seen together occasioned no small amount of sensation, and it led to their being much more prized and sought after than before; indeed, they were considered the A 1 breed of the country for some time.

Mr. ROPER, in reply, said he had never been able to test its actual result, and, as they knew, farmers and their servants were rather creatures of habit, and had gone on upon the old principles. He himself was still of opinion that feeding three times a day, and giving the animals a little hay, was the best plan. He went on the farm just the last thing at night and saw they had a little hay given to them. They were fed morning, noon, and at five o'clock, and he fancied that by so doing he gave them a better chance in the long-run of watching their appetites, which, in his opinion, was most desirable. He always liked to see the animals run up to the trough when the feeding-time arrived. If he saw his man at the trough and the animals at the other end of the farmyard he was at once greatly concerned, because he began to think the man had over-fed them, and they all knew what that meant. If the animal once got into that indifferent state, very little progress was made; and he thought the great object of farmers should always be to keep the animal ready for its food, and by feeding them three times a day there was a better opportunity afforded of watching their appetites than when fed only once or twice a day. At feeding-times, if the man looked after the animals well, and gave their food in small quantities, and acted with a little judgment, it could soon be seen when the animal had its full, and to take care that none was left. It was a grand thing when they could eat a clean trough every time. As to the third, fourth, and even second feeding, it was a mere bagatelle, and, perhaps, with feeding four times it was beyond the mark, as it was not wise to disturb the animal at that time of night.

Mr. W. DELVES: John Turner used to turn out beautiful Sussex stock, and so did your father.

Mr. GEORGE LANGRIDGE desired to ask whether the Sussex stock were likely to be returned to this neighbourhood? There used to be a good many bred here in the district, and he wished to know whether they were not capable of early maturity—whether it paid farmers better to cultivate their land for hops—and whether the Sussex stock paid for breeding and held their own as compared with other breeds in the country?

The Chairman said the question had been asked frequently, and it was a rather difficult one to answer. He took it in a great measure that some time ago, when Sussex stock were at a low price—he meant lean stock—that Irish and Dutch cattle were introduced. Sussex steers in the autumn fairs in that county were then fetching from £5 to £10 a piece. That was very plain they were not paying, and not only so, but it was a ruinous

price for the breeders. Then Irish beasts were brought over in great numbers, and were sold as calves, although they were really yearlings, for 50s. or £3 a head. Then the Dutch cattle became introduced, and were distributed over the country, selling at a very low figure—£3 or £4 a piece. The question then naturally arose as to whether it was not necessary to feed these beasts and do away with the Sussex herds. Again, from various causes, Shorthorns had got into very great notoriety, and the chief encouragement was given to this breed by the different agricultural societies and at the principal one—the Royal Agricultural Society of England—a short time before, there was not even a class for Sussex stock. Shorthorns consequently became a fancy breed, and perhaps to this day, had it not been for the great energy of Mr. Edward Cane and some others, there would not have been a class for Sussex stock at Smithfield show. Those present knew very well there was no encouragement in this respect to tenant farmers generally about that time—agricultural prospects in general being at a rather low ebb just at that period—and tenant farmers did require some little assistance in keeping up a perpetuity of the breed of Sussex stock. Instead of being assisted by the landowners, they all—everyone to a man—went into this fancy breed of Shorthorns, and in their own locality he could not recollect but a few farmers who did not introduce some other breed. The Goldes' and Noakes', of Burwash, were exceptions, and there were one or two others. They were all running away to these Shorthorns. [Mr. ROPER: Mr. Court-hope.] That gentleman had had a very good herd, but he had discontinued it not from selfish motives of any kind, but simply because another kind of stock answered his purpose better. In this locality, for instance, instead of assisting in the breed, which was almost, he might say, indigenous to the soil, and was proved by experience to be most suitable to the district, they introduced those mongrel kind of animals called Shorthorns. They, however, only lasted a short time. Of course, if farmers wanted to make them pay in any shape or way, it was necessary to have sales, and what was the effect of those sales? The stock did not realise so much as the Sussex stock did before on these very farms. Mr. Smythe said Wadhurst was at one time celebrated for good Sussex stock, but he had given up his herd. These, then, were some of the causes which contributed to the fact that the Sussex stock were not so common as they were at one time. Other causes might occur to some of them present, but he thought those he had mentioned were the chief ones. There was another thing which had just occurred to him. Mr. Roper in his paper and remarks had said he preferred the primitive style of building for the housing of cattle. Now he (Mr. Noakes) should like to call attention to the box system, and the plan he adopted in the feeding of his cattle. He gave them cut food with a mixture of oil-cake and so on. Many plans had been tried, but had failed, not from the systems themselves, but from bad arrangement of them. Formerly pits were dug, but very often the drainage was bad, so that the water got into them, and the animals fed there were in a very wet and uncomfortable state, which they, as practical farmers, knew was very much against the animals' well doing. Then other plans had been practised, and better arrangements made, where the animals could lay equally as dry and as comfortable as in pits with a little straw in the ordinary manner, as in an open lodge. His opinion was that a certain proportion of the building should be arranged for the fattening of stock, to be kept in that way. As to the habit of feeding, he quite agreed with Mr. Roper that any stock intended for grass would be very much better not to be under cover, but simply to have an open lodge in the yard for their use, so that they could get out of the rain, and be in the open in dry weather. By this means they would be much sooner matured for being run out in grass land. He had no doubt the cattle would improve better in that way than being in pits and boxes. With regard to the feeding, whether two, three or four times a day, his experience led him to believe that feeding three times a day was the best. He fed them early in the morning, and at noon, and as late at night as he could get a man to be there—about six o'clock at this time of the year. With regard to what Mr. Roper had said about feeding with hay, he was of the same opinion when he commenced feeding stock, but he found from experience that it was not necessary at all, and no doubt many would corroborate him in what he said on this point. Since he had adopted the plan of feeding his animals with chaff entirely he had never occasion to have the farrier in for 10 years.

He had generally noticed that beasts had thriven to his expectation—he did not say they paid or anything of the kind, but at any rate they had got on and did well. A discussion had arisen as to the cheapest mode of fattening animals, and the best ingredients to use, and how to use them. He found it was all important to give a variety of food. By giving an animal cake and hay, which was wonderfully expensive, their object was not gained at all, because an animal bred on the farm did not want much of that feeding. He had known good steers sold off the farm, which did not want anything but the hay, but with the cattle that he had spoken of—the Irish and Dutch—he had found that they did not fatten so readily in this way. As Mr. Roper had said, it was most important that farmers should arrive at some plan of feeding which would give some little profit for the outlay. His plan was when he commenced feeding the cattle to get two-thirds straw, with one-third hay, and a little pea-meal. He fed them with pea-meal because he had found beneficial results attending it, especially in hardening the flesh for the butchers, for if they once found out that bean-meal was used they disapproved of it. With this he put a little mixture of cotton cake and linseed cake, about one-and-a-half pounds of each a day. He must say he found this a capital mixture. He generally grew swedes in as large a proportion as he could—sometimes at an inconvenience, for he did not like growing root crops during the cultivation of his hops, and he was inclined to exclaim that he wouldn't grow any more, but when the season came to use them he often wished he had more. His plan was to pulp the swedes, as his opinion was that by pulping and mixing in that way—he hardly knew what proportion to say—but he thought in that manner they would economise their swedes, if not one-half certainly a larger proportion, and in mixing them with the chaff his object was simply to dampen it in order that the meal might adhere to it. With this mixture it would do the beasts as much good as if he gave them a double quantity of swedes. He did not wish to say anything for or against artificial food, but he might just state that for several years he had made a practice of using a little of Beach's food for sheep and particularly for beasts, and he found a very great advantage from it. Whether it created an appetite or not, he could not say, but he knew the troughs were licked out much cleaner—in fact, when the beasts got in the habit of eating it they liked it and seemed so anxious for their food that they licked the wood as hard as though they would almost eat it. He should, therefore, very strongly recommend them to use Beach's food. He would not pretend for a moment that with cut straw and hay they were going to fatten their cattle without something else. He had some large steers and good-sized beasts, 100 stone each, but he had never fancied he could fatten them off without giving something like 14 lbs. or 15 lbs. of cake per day with a little corn. He kept them working on and the sooner he got rid of them the better. According to his experience, that was the most economical plan of fattening beasts. There was a point he should like to mention with regard to the building. By having beasts under cover the washing away of the manure as in open yards was of course avoided, and there was this great object in view, for many of them could not fatten a bullock were it not for the manure for the hops. He kept an account of the total expenses, and found he sometimes got £5, sometimes £3, sometimes nothing at all, and sometimes lost by the fattening of stock. He very much feared as things were working now it would be so this year, but fortunately he had not got to buy things for his cattle. He was afraid, however, he could not put them down as so much profit. As a matter of justice he must state that although Mr. Roper had spoken of his buildings being of a primitive style, and added that he had no preference for one or the other mode of feeding he (Mr. Noakes) gave notice that Mr. Roper's beasts had thriven exceedingly well. Whether it was the four meals a day or the extra meals of ground corn he (Mr. Noakes) did not know, but he had always known Mr. Roper's beasts to thrive exceedingly well. He was a few days ago at Tunbridge and was struck with a pair of steers which Mr. Roper had sent there. They were certainly beautiful beasts—beautiful specimens of the Sussex breed, and exceedingly well fattened, and he very much regretted to hear Mr. Roper say it was the last he should have. He was sorry indeed to hear it. He could not suggest what could be done, but it was a great pity to see such fine stock go out of management, for if they went on as they were going now, and as they had done, the breed would very

soon be come extinct, and that he was sure all would very much regret.

Mr. WILLIAM DELVES: Will you kindly inform me with regard to your pulping whether you let it lay a certain time with the chaff or whether you mix it up and use it almost immediately?

Mr. NOAKES: When I commenced pulping I was told the plan was to mix it up and let it heat. I thought that must be right. I tried it, however, and found it was wrong—a mistake altogether. The longest time I should recommend any one to mix it before using it is at least three meals. In fact, my plan is to pulp the roots, and mix one meal out of another; that I think is the best plan, just sufficient to moisten the cut food and ground corn, which then adheres to the chaff, &c., and I think that is the proper plan. When my man goes to his breakfast he prepares one meal, and comes back and then mixes up a dinner; when he has finished the dinner he mixes up the supper meal. I think from my experience that that is the best plan.

Mr. PHILIP SIMPSON said that with regard to pulping the difference of opinion was something extraordinary. Last November he was down in Suffolk, and there met a party of farmers—gentlemen who farmed five or six hundred acres of land, with very little grass indeed, perhaps not over thirty acres, but all arable—and they were talking about the feeding of stock, and the manner of pulping was also brought up. Four out of the party informed him that they would not use a pulper. They had used one, however, for some time, but they would not use it again to pulp roots, not even if it was supplied for them. That only showed the difference of opinion in different parts. Those Suffolk farmers were very large breeders. At the time he was living at Bayham he had a pulper down, but he supposed it was not large enough, or something of the kind, as he could never get enough for his bullocks, and so he sent it back, and had never tried it again. He had since always used a Gardner's cutter, and that answered his purpose remarkably well. He always had it mixed up twenty-four hours before using it, and put half a bushel of turnips to a bullock once a day, and with this he mixed up a certain quantity of chaff and cotton and linseedcakes. He was convinced that by giving turnips and dry chaff and corn it would not go down well, but if it were mixed up liquid with the dry stuff it would suit very much better. As far as feeding was concerned, whether the animals were fed three or four times a day, the great thing was to see that they were fed regularly, and at the proper times, and to give just the quantity they would eat. A man would soon see, would soon find out what they required. As for giving them hay he thought that was a wrong system. It was not only expensive, but in his opinion not at all required. The more they eat it up the better would the animals like it, and he had known bullocks sometimes get "hoven" from it. There was one other thing he should like to speak upon. He had certainly been never much of a breeder of stock, and could not, therefore, say much about it, but when he came into this county he did not care much for the Sussex stock; he supposed it was owing to his not being a Sussex man, but one reason was because the herd were not all good milkers, and he was rather inclined to go into dairy stock. It was very profitable to the farmer to keep stock well, and if they were going to feed them at all they wanted to do it in such a manner as to bring a speedy return. He did not agree with Mr. Roper about the yards being in a primitive state. If he went into farming again he should like to pay his landlord 5 per cent. to have his yard covered in entirely; he had seen it carried out to very great advantage. The stock did not want half so much to eat. The great thing was to keep them warm, and they then did not want so much food. Then with regard to manure, farmers did not think so much of that as they should. If their yards were open one part higher and the other part lower the manure was washed by the rains, and could not be of much good then. Therefore it behoved all landowners, if they would look to their tenants' interests, to make covered yards for their stock as they could be kept better that way.

Mr. B. BUSS: In what way would you recommend the use of roots?

Mr. SIMPSON: I should recommend a Gardner's turnip cutter.

Mr. BUSS: How would you mix them after cutting them?

Mr. SIMPSON : Just the same as pulping them ; mix enough for twenty-four hours.

Mr. NOKES : Can you state the objection that Suffolk farmers give to the pulper ?

Mr. SIMPSON : They could not get the beasts to fatten by it, and after trying it for two years they gave it up, and they have now gone back to the old system.

Mr. W. DELVES said he had had no experience in feeding bullocks with pulpers because he had never tried it, but for some time he managed a farm where a great deal of stock was kept with very little food comparatively to keep it on. It so happened that there were a great many horses kept on the best kind of hay, and a great many fatted bullocks were kept on it also. A number of dairy cows had to be kept on what they could get—the tops, bottoms, and sides, and a certain lot of straw—yet it was important that the dairy cows should be well kept, in order to produce good cream and a lot of milk. In that case he got a pulper from London, and with that they mixed the chaff—they cut up the hay which would otherwise have been eaten up—and, after making a pretty good mixture of the straw and the hay, and a sufficient quantity of roots pulped, that formed sufficient food for the day. At any rate the cows were remarkably well. They ate it very clean, and there was no waste. They gave good cream and good milk. In addition to this he should mention that they always allowed a little oilcake once a day, for he considered that if they would have good milk and cream that must be done. He quite agreed with Mr. Simpson that farmers did not think enough of the manure, but at the same time he (Mr. Delves) was not such an advocate for covered yards as some of his friends were. He thought one great point in the buildings was that they should have shoots round them—good rain-water shoots all round the yards—so that the water would run off the building. [A VOICE : How about thatched buildings ?] He would certainly have the yards so constructed that no water could get into them or flow through them, except what came straight down from the sky, and he did not think that would hurt the manure much. With regard to pulping, if he were going to farm to-morrow, and had to keep stock artificially (if he might so express it), he would go into pulping and get a good supply of roots. So well did these cattle eat to which he had referred, that he recollected the man who looked after the cows used to say, “We must find something else, and not begin our roots yet, because they might not last, and then the cattle would lose flesh.” He, however, guarded against this by giving them an additional allowance of cake. He did not know whether it was the universal custom, but in the north and in Lincolnshire and some other parts they highly valued the cake, which he knew was used very fairly here, and yet he could go to some farms now in this neighbourhood in which, in the memory of man, they had not used 1 cwt. of oilcake. But he was told that in the north they so valued it, that the outgoing tenant only had to produce his bills—if he was a respectable man—to show the quantity of oilcake he had had, and had fed on the farm during the outgoing year, and half the amount was always allowed by the valuer without any question. That showed the opinion of the farmers there as to the benefit of the oilcake in the dung and the manure.

Mr. BATCHELLER knew very little as to the breeding and rearing of stock, but he begged to differ from his friend Mr. Roper as to the growing of roots. Mr. Roper had said that growing of roots was antagonistic to hop growing. In his opinion it was the very thing they wanted for hop growing. Mr. Roper had said that he could not manage the two things together very well. His opinion was that the two things wanted working together. Any grower to any extent in this neighbourhood would go in for roots, and he believed that if a farmer would grow hops to advantage he must grow roots also. The root growing paid him better than anything else, and he believed that if Mr. Roper really tried it he would find it paid him. It was plain enough that the more manure made on the farm the better would it pay. He had only a little experience it was true, but he found the more he could produce on his farm the better it paid, and the less he had to put his hand in his pocket for cake and artificial food the better. He recollected in his time fattening twenty without the aid of a single pound of oilcake or artificial food at all, as he used nothing but swedes, hay and straw, but he turned out some very good beasts. The better they farmed their corn land, and the better they farmed their root land, the better position they were

in with regard to their hops. The fact was that in this neighbourhood, in his opinion at least, they did not farm well enough for their own advantage, and if they farmed better they might depend upon it that more money would come back again into their pockets. There was another gentleman in the room whose opinion he should like to hear with regard to the growing of roots. He referred to Mr. Williams.

Mr. WILLIAMS (Wicklurs) said it was not his intention to say anything, but, having been challenged by Mr. Batcheller, he might say that he found great difficulty in growing hops and roots together. There might be many gentlemen in a different position to himself, for, unfortunately, he was badly situated for cottages for his labourers, and having a largish proportion of hops under cultivation they required a good deal of attention, and so did roots, and therefore they could not work both together to advantage. When he first went to his farm he grew a larger proportion of roots each year, but last year he attempted it, and got his ground in really beautiful order and manured it well, but could not get any roots, and from that time he determined not to sow any more seed. He did not mean to say that he might not at some future day. He did not know he could say much with regard to the fattening of stock, but there was one thing he might mention. A relative of his—Mr. Levett, of Glastonbury (Kent)—had told him, and it struck him as being very beneficial, that he had a large stack of hay in the spring of the year, and when his rye grass was ready he cut the straw up with a certain proportion of this green stuff. He then stacked it in his barn, trod it in, and, if he (Mr. Williams) remembered rightly, put a certain amount of salt with it. After allowing it to remain there some time he gave it to his cattle, and found it very useful. In fact, so good was the provender that he had a difficulty to keep his waggons from it. Mr. Levett cut it with an engine and also steamed the chaff a good deal. He had another farm some distance off, and there he had some very inferior hay, whilst on his home farm the hay was of a very superior quality. He therefore conveyed the inferior hay from the outlying farm to his home farm, and the superior hay from the home to the outlying farm, so that the cattle on the latter farm were fed on the superior hay. The inferior quality was cut up and steamed and then given to the cattle on the home farm, and it was found that these got on much better than those fed on the superior hay.

Mr. C. HAMMOND said that if anybody would ensure him a root crop, he would by all means grow more than he did, but he found it difficult to get a good crop of roots. It was only two years out of three that he managed to get a crop.

Mr. BATCHELLER : I believe it is done always.

Mr. C. HAMMOND further said that this year he had got a crop of turnips, but he had farmed exceedingly well for them in past years with farm-yard and artificial manure, although he could not afford the farm-yard manure, because he wanted it for his hops, and yet he had to plant not once, but twice, and very often not get a crop at all. He got his land as nice as anybody could get it, but whether it was poor land or whether he did not manage it rightly, he could not say. He had planted a few acres of turnips only, but if anybody would tell him how to get a good crop he would plant eight or ten acres. Respecting young stock, he had always found in his experience that the better they were treated the better beasts would they become. He always liked to give young stock some food as soon as they liked to eat it. For instance, he would give a small quantity of oil-cake, and when they liked it, a bigger piece. He found that it was in their young days that they required most attention. With regard to Sussex stock he must say they were superior to any stock he ever had. He knew one or two of his friends who advised him to part with them, and he gave it out that he was going to do so, but no sooner had he done this than he had four or five applications for them offering good sums, so he thought that if the beasts were so much to the applicants they were to him, and he declined to sell them, being glad ever since that he had not done so. He liked to go into the yard and see them improving from day to day, but with the Shorthorns and other animals he never could see that they improved very much. As to the decline of the Sussex stock he attributed it a good deal to the past unreasonable orders in council which necessitated a long period of time to elapse before the bullocks could be removed.

Mr. WILLIAMS said he was very glad to be in a position to give Mr. Hammond a wrinkle. Mr. Hammond had said

he should certainly go into the root-growing more if he could be secured a crop. He supposed Mr. Hammond meant if the plant could be kept from the flea. He had been assured and had indeed found out by experience it would meet the case to a certain extent by sowing a larger quantity of seed. Instead of sowing a quart to an acre, let them sow a gallon.

Mr. HAMMOND: Why, I have sown two gallons.

Mr. W. DELVES: Then sow three.

Mr. HAMMOND: I have drilled a gallon, and I have sown a gallon broadcast and then lost it.

Mr. WILLIAMS: Perhaps it was not good seed.

Mr. HAMMOND: Oh yes it was; it came up all right.

Mr. WILLIAMS: Well, it strikes me that that is the best plan.

Mr. SIMPSON: Have you tried mangolds?

Mr. HAMMOND: Yes.

Mr. LANGRIDGE: Have you tried the water-drill?

Mr. HAMMOND: No.

Mr. LANGRIDGE: A gentleman told me he never missed a crop, and he always drilled the seed in with water. I saw that he had a wonderfully good crop, and he told me it was always so.

Mr. W. DELVES: And this shows the contrast. Now I recollect a gentleman who never missed a turnip crop, and he would always have his seed sown so thin that he always did it on horseback, and only put a pint to an acre.

Mr. J. DELVES (Tunbridge Wells) thought the remarks Mr. Hammond had made as to the rearing of young stock were well deserving of attention. There were no doubt many who were not quite aware of the immense loss of weight in meat. That was the result of the inattention to the young stock. As an instance of that he could tell them of a gentleman in Hampshire who had produced nearly, if not quite, eleven stone of mutton in less than twelve months entirely upon the principle of early feeding and good feeding, with good management of his young stock. He (Mr. Delves) therefore thought that, if the farmers fully knew the value of what butchers called the first flesh, which was lost by keeping the animal in a bad state, and not only so, but never regained, they would feed their young stock well. The loss of weight in an animal was almost double what they might suppose, and he maintained this much—that if stock were kept in a better way when young this country would produce with the same number of head of cattle double the weight of meat we now annually produced.

Mr. ROPER inquired whether it had occurred to any agriculturist the scourging character of the root crops on their soils. In his experience a good crop of mangolds would perish the soil, and leave the land so impoverished that the future crop on it would be very unremunerative.

Mr. FULLER (Wolverhampton) said with regard to the feeding of stock, it depended very much upon the locality in which the stock was kept, and it was well to remember that the atmosphere must be congenial with the process of fattening. He knew one large breeder of stock who always kept a thermometer in the building, so that there might be a certain degree of heat. He opened the ventilators if it was too hot; if it was too cold, he shut them. As to the farmyard manure, he was convinced that in this country agriculturists could not do without it, as an illustration of which he pointed to the Ayrshire cattle, which would be useless on English farms.

Mr. BUSS said he should like to hear the question of feeding even more discussed. It was his lot to have two separate plans of cattle-feeding. The one was superintended by a very observant man, and under him the cattle thrived very well. At first this man mixed his roots and chaff together, but experience showed him that was not the right principle, so now he cut a good lot of hay and straw, sufficient for two or three days. This he spread over the floor, and over it again a quantity of pulped roots. This obviated the heating. As the roots went down he mixed it up still more by adding more roots and chaff, and so kept it on continually. The other man was constantly feeding his cattle—three or four times a day—and yet they always thrived. As to root-growing, he (Mr. BUSS) did not think the county was suitable for it, but if they would grow hops well they must also grow a lot of roots. What they wanted to do was to grow roots against adverse seasons, if they could, and so to keep the stock that a good deal of farmyard manure would be made for the hops. He

was sure of this—that, to command success in hops, they must produce a large quantity of this manure. Mr. BUSS concluded by proposing a vote of thanks to Mr. ROPER for his interesting paper.

Mr. ACTON BURROWS expressed his dissent from Mr. Fuller's remarks respecting farmers not being able to do without farmyard manure, for the Manager of a London Manure Company gave him the name of a gentleman at Tunbridge, worth £60,000 or 70,000, and who had never used any farmyard manure or kept a head of stock on the place.

Mr. FULLER said he quite believed that, and could bring other instances, but they might depend upon it locality had a great deal to do with it. He had made inquiries respecting soils in this neighbourhood, and was certain they could not get on here without farm-yard manure, although he was quite aware that isolated crops might be grown without it. He believed it would be a sorry day for England when farmers gave up using their farmyard manure. He most strongly recommended the steaming of hay, for it was wonderful what steam would do. As regarded pulpers, he fully believed in their utility, and could cite many instances in which farmers would not give up their pulpers for anything whatever.

A vote of thanks to the chairman terminated the proceedings.

THE CULTIVATION AND MANAGEMENT OF HOPS.

Mr. John Noakes, of the Furnace Farm, Lamberhurst, read a paper on this subject at the last meeting. Mr. Noakes, who is president of the Club, is well known as one of the most successful hop growers.

Mr. NOAKES said: My paper, so to express it, you will find is not a scientific one; it is founded upon practical experience and observation. The subject, The Cultivation and Management of Hops, offers a wide field for discussion, and I will therefore endeavour to give my ideas in as few words as possible, in order that members probably more experienced than myself should have an opportunity of taking part in that discussion. I have read with much pleasure, in the Journal of the Royal Agricultural Society, Mr. Charles Whitehead's essay upon the recent improvements in the cultivation and management of hops. It is not my intention to criticise that essay. It is doubtlessly ably written, with evident scientific as well as practical knowledge of the subject, but the writer's remarks generally, in my opinion, apply more particularly to Mid Kent. For instance, speaking of the preparation formerly made for the planting, he says "Pasture land was usually preferred, for some unknown reason." I have no doubt there are many practical planters in this room who would only be too pleased to have an old pasture with suitable soil and situation to break up in preference to arable land, well knowing that when the hops are planted the land is much easier to cultivate; that more abundant crops are obtainable, that less manure is required, and that if better quality is not ensured, "coloury" samples (which are equally if not more desirable to have) are. Without further preface I shall commence with the preparation of the land for planting, and will take meadow or pasture, commonly called fresh land, and the ordinary arable separately. The first step, and which I consider important, is to get the land as bare of herbage as possible, and to do this I would recommend crowding on a number of sheep, to be trough-fed, two or three weeks before the breaking up of the land. By so doing the turf is much easier buried, and the land is made solid and firm much sooner than when a quantity of old grass is ploughed in. I prefer to plough two furrows when the subsoil is loamy or broken than doing it in one operation. The first furrow I have very fleet—less than three inches if possible—the horses to walk in the furrow, on the sod when ploughing the second, which ought to be not less than from eight to nine inches, making in all nearly twelve inches, which is better than a greater depth. If the subsoil is clayey or retentive it is better to plough one furrow only from nine to ten inches deep, the horses of course walking on the surface. Arable land should be ploughed deeper than ordinary ploughing and subsoiled. For this purpose fine, dry weather should be chosen, in order that the horses may walk on the surface. The subsoiling may be done with the ordinary plough without the wrist plough, but Reed's subsoil plough is preferable. Sufficient care is not

taken when planting hops, and it often occasions much delay. It is too frequently left until the busy season of digging and dressing, when the operation is hurried, and consequently often very badly done. About the middle of February, should the weather permit, is the best time for planting; the frost after that time is not so likely to draw the seeds as when planted in November (a time some prefer), and there is sufficient time for the soil to close well round the roots before the earth gets dry in the spring. Care should also be taken to provide a mixture of dung and mould to plant in, either on pasture or arable. The proper distance for planting will vary according to sort, soil, and situation. I prefer generally 6 feet 6 in., but on uplands, rather exposed, where Jones's are intended to be planted and short poles used, 6ft. or 6ft. 3in. is a preferable distance. Three poles to the hill, 6ft. 6in. plant, which will give 3,090 poles to the acre, will grow more hops, in my opinion, than 6ft. plant with two poles to the hill, 2,420 to the acre. The wide plant also has its advantages in the expense of tying, cultivation, &c. I much prefer bedded to cut sets, either for pasture or arable land; they are more likely to form a strong hill sooner than cut. Two sets are sufficient for a hill, and are better than more, if they are strong and well-rooted. Many planters cut nearly all the roots off—in fact, reduce them almost to a cut set. I do not approve of this plan; I much prefer to plant the set nearly as it is taken up, only tipping the coarse roots, and taking off those that are bruised. Neither is sufficient care taken generally to get sets true of their kind and from a distance. I would rather buy sets at a good price far from home than have those grown near given to me. It is no doubt equally as important as a change of corn for seed. Many planters grow turnips, mangold wurzel, or potatoes amongst their young hops, and I have seen cabbage and kohlrabi. I think it is wrong to do so, and the old maxim "penny wise and pound foolish" applies well to this practice. I consider anything of the kind I have mentioned planted amongst young hops, besides taking much out of the land, rather encourages grub, wire-worm, &c., and hinders cultivation. It is much better to cultivate well, and set traps of slices of mangold wurzel to the hills to catch wire-worm, &c.—to have these constantly attended to, and so thoroughly destroy the vermin entrapped. On meadow land not well drained, I should advise its being done after the sticks are set, and previous to planting. On arable land it should be done in the autumn or winter, after the planting. It is most important that the land should be thoroughly and deeply drained. The greater portion of my hop land is drained 5ft. deep. Where the soil would not permit of that depth, it is 4ft. and none less. I take it as a rule, land that will not bear deep drainage is not hop land at all. Since the introduction of ploughing, planters are more independent of casual labour, which was often had in quality and expensive. Although I plough a little occasionally, and that only in fine weather, when the land will bear the horses, I much prefer digging. The saving by ploughing is very trifling, if any, when we consider the cost of digging, which, on an average, is about 20s. per acre. I think it wrong to dig young hops the first winter after planting, until after they are poled. I have seen considerable injury done by digging too closely to the hills, and many sets and even hills dug up entirely. It is best to get the poles stocked and the manure carted early on the young ground. At the beginning of March or before, if the weather is favourable, the dead bine should be cut off and the hill cleared of all weeds. About the third week in March the polling should commence, and the digging immediately follow. The dipping or creosoting of hop-poles has caused a great change in our system of polling. Large 1ft. poles are no longer necessary, except in a very few instances. Moderate-sized well-cut 13bits. are found to be sufficient for Colegates and Goldings. Jones's, instead of taking the refuse from other grounds of very uneven length, varying from 7ft. to about 12ft., are now poled with nearly the same degree of uniformity as other kinds. Greater care is now required in arranging the poles to the ground than formerly. It is now easy to over pole, which I have seen frequently done, much to the injury of the planter; but under the old system the sharpening down would generally obviate that danger. Many growers dip their poles without being seraped. I do not approve of the plan, as the bark must hinder to a great extent the creosote entering the pole. It is very doubtful economy, as the cost for seraping—threepence

per hundred for small bundles, and fourpence for large—is very trifling. It is very important to have the polling done well; whether the work is well done or indifferently done the difference is of considerable weight per acre. It is often the practice to crowd the poles too near the hill, in which case after they are put up they are in too slanting a direction, the tips of the poles get together as the weight of the bine and hops increase, to the injury of the crop and sample. Poles should be set firmly in the ground, nearly upright, and the width of plant and length of pole should regulate the distance apart at the bottom, so that the tops are an equal distance apart. It is clear by polling upon this plan every pole gets equal benefit from sun and air, which they do not when netted together and housed, as they frequently are. Dipping gives us the opportunity of early polling, which I consider a great advantage. Frost is not so likely to injure the young bines, and the best bines are not bruised and broken as they often are when poled late. All planted hops should have short poles to them: they root much stronger than if allowed to run the ground or twisted up, as was the practice formerly. The new modes of training hops I am not in favour of. The string system is being gradually discontinued, and Coley's inclined system (an improvement upon the string) I do not think will come into general use. I need not dwell upon the cultivation after polling, but simply remark I am not an advocate for deep ridging until after the first week in July; after that to nidget with one-horse shallow, and frequently. I approve of the plan of striking and raking off before picking, because the land is firmer after picking, and resists the heavy rains of winter—in fact, is altogether in a better state than when autumn striking is resorted to. Manures should be put generally all over the ground, except in a few instances, such as weak plants, or when hops from some cause require an immediate stimulant. In that case rapedust or some kind of artificial manure may be chopped in around the hill to advantage, but I would not advise its being put too close. The last season has been a most anxious one for the growers—at one time threatened with almost total blight, then a ray of hope that we should grow a few. Those who resorted to syringing were equally dismayed. The blight was so tenacious that the operation was obliged to be repeated over and over again, without apparently any good effect. At last, however, perseverance was rewarded, and syringing prevailed. In the meantime, it will be remembered, great atmospheric changes took place—the wind veered from the east to south, and then to west. Favoured with warm showers, the hops, not washed even, and not irretrievably gone, responded in a marvellous and almost unprecedented manner. The district is certainly favoured, whether syringed or not; and growers can congratulate each other alike and singularly enough, though we have experienced another blight, the advantages of syringing are much doubted, and still remain subject for much discussion. It is a fortunate circumstance that those who syringed are satisfied, and those who did not are satisfied also. I can confidently tell any one who may syringe in future that soft soap is all that is required, and that tobacco and other ingredients are an unnecessary expense. Mould is now very prevalent in the Weald of Kent, much worse than formerly, and it is to be attributed to various causes—firstly, to the introduction of new sorts; secondly, planting on land with too shallow soil, and using artificial manure almost entirely; and thirdly, planting kinds not adapted for the soil. The free use of sulphur is generally a remedy, but there are instances where it has had but little effect. My plan is to use about 50lbs. of sulphur per acre on the first appearance of mould, and to continue at intervals of about a week until the bur is breaking into hops. By adopting this plan, I have never had mould to do me injury. Other forms of blight I am happily not acquainted with, excepting red spider or rust, which I am not much troubled with. If I should have it to any extent I should use sulphur, as I understand, if taken in time, it is generally effectual. It is important so to arrange our plantations as to have a succession of sorts judiciously selected and sufficient east accommodation to enable us to secure the whole growth with colour and in good condition. More east room is required now than formerly, when good ripe yellow and rather brown hops were esteemed, but now are very unsaleable. Too early picking is no doubt wrong, although occasionally we may get a colour choice sample,

but the loss in weight, injury to the stock, and other drawbacks are incalculable. The drying or management of hops is perhaps more important than any part of the cultivation. Formerly, very poor accommodation was given for drying. With the hair but a few feet from the fire, a very short rafter, with very little air admitted, the hops were baked rather than dried. Although great improvement has taken place during the last few years in the picking and management, more kiln room is generally required to secure the crop in the best possible condition, and also to prevent excessive overloading, so injurious to the sample and the great disadvantage of the grower. There is a great difference of opinion as to whether the old cockle principle or open fires are best. I am of opinion cockles are best suited to the Weald of Kent. Less skill is required in drying; they are more economical in fuel, and, if not superior, a softer and equally good sample may be produced, without the danger of scalding or burning there is with the open fire. The plan I adopt, and which I think the best,

is to load moderately, not to hurry the drying, but to keep the hops on the hair nearly twelve hours; not to turn them unless quite necessary, nor take them off before they are dried quite sufficiently, but lump them in the cooling-room, well cover them with cloths, and allow them to remain until the next oasting is ready to come off. They are then uncovered, and, should there be any tough on the outside of the lump, they are raked off and put back on the kiln to come off with the next load. The lump is then removed for treading. I have pursued this plan for the last ten years, and during that time have not had a single pocket objected to or rejected on account of mismanagement. Some years—this, for instance—there being an exceedingly good growth, both for colour and quality, the presser has the advantage, but generally I am in favour of the old plan of treading. I have now, gentlemen, waded through the different stages connected with the cultivation and management of hops, and, unless I was to go minutely into detail, I have nothing more to add.

THE MALT TAX.

ESSEX CHAMBER OF AGRICULTURE.

The following is a full report of the recent meeting at Colchester:

Mr. J. ROUND, M.P., the new president, said the subject for discussion to-day is not a new one. It is the subject of the tax that is levied upon barley when it is has been converted into malt. It is a tax, as you know, which yields seven millions of pounds annually to the national exchequer. This is the time when the Chancellor of the Exchequer makes his annual statement to the country—when he either has to put new taxes on, if there is a deficiency, or to perform the more pleasant duty of taking off existing ones if there happens to be a surplus. I believe I am right in saying that this year there is no doubt there will be a surplus. I have heard it stated that it will be as much as five or six millions—whether that really is so of course I do not know—and therefore this is the time (now or never) when those who believe that a tax presses unfairly upon any particular class must bring their claims forward, and put every legitimate pressure upon those who are in authority to consider their case. A great deal of the imperial taxation has been repealed during the last twenty years. Something like 20 millions has been repealed, I believe, during the last ten years, and though those connected with the agricultural interest have of course generally benefited by the repeal of that taxation, still they have not had the particular and direct benefit that other classes have had. And, more than that, while imperial taxation has been repealed, local taxation has during the last twenty years very much increased, and that taxation has fallen, we know, entirely on the owners and occupiers of land and houses. So that the occupiers of land and houses have not merely seen existing burdens taken off other classes, but they had to stand by and see fresh burdens continually imposed upon themselves. I won't enter into the subject myself now, because Mr. Gardiner has kindly promised to introduce the subject, and will do so, I have no doubt, most ably. I would merely refer to the report of the Select Committee of the House of Commons which sat to consider this subject in 1867-68, and would remind you that they came to the conclusion that this tax might fairly be repealed if some substitute could be found for it. I need not also remind you that many eminent statesmen of both parties have declared their opinion that this tax was an unjust one, and that it ought if possible to be repealed. I am sure that all those who have read the evidence that was brought forward at that Select Committee will have no doubt that this tax presses heavily both on the producer and the consumer. If, as Mr. Read states—and I have no doubt it is the case—every acre of malting barley has to pay £5 or £6 tax, surely that must be very hard upon the person who has to grow that barley, and if some 50 millions of bushels of malt pay a tax every year of 2s. 8½d. on each bushel, surely that must increase the price of beer to a very great extent.

Mr. J. S. GARDINER, of Borley, read the following paper:

I assure you I approach this subject with great diffidence, fearing I may not be able to do justice to the cause I advocate, viz., the repeal of or the commutation of the Malt-tax. I am sure there are many gentlemen connected with this Chamber far better qualified than I can ever hope to be to handle this question in a way to make an impression upon those who differ from us at this meeting, also the public generally, and thereby assist in removing this tax, which is the foundation of two of the largest monopolies now in existence; but having undertaken the task I will, with your kind forbearance, endeavour from my own point of view to open up the whole question for your discussion and decision, it being my intention to submit a resolution for your approval. It is to be borne in mind that this tax began life in 1697, at 6d. per bushel, as a war tax, and, like the income-tax, with the understanding that as soon as the war was over the tax should cease; but like other promises of the Government, then and since, the promises were like pie-crust, made to be broken. The tax has had a long life, varying in amount from 6d. to 4s. 5½d. per bushel, according to requirements and the subtle mind of the Chancellor of the Exchequer, who had the duty to perform of hoodwinking and gulling the public, to the disgust of our forefathers, who grumbled and bore, as farmers can according to our critics. When they growled louder than common something was taken off, and when they were a little more content, war wants cropping up, on the percentages went again, until it reached our time. As our fathers did so do we now, but this giant tax still exists; during the Crimean war at 4s. per bushel, now at 2s. 8½d., producing the gigantic sum of nearly seven millions per annum, the measure of its iniquity—raised from the raw material barley, principally produced by a few English counties, as I shall be able to show before I sit down. I have been engaged in this agitation over 27 years, following the lead of the representative men of our class located in every district. I have attended with them three deputations to Chancellors of the Exchequer—twice to Mr. Gladstone and once to Mr. Lowe, who never attempted to meet the argument, but blandly smiling, sliding off with "Well, it is a very difficult question to treat with, and we would if we could, but, hem, ha, we don't know how to spare the money." You see, gentlemen, we were not cotton, tea, or sugar men. We have suggested ways and means, but the gentlemen in office had always some pet banthing to dangle before the commercial and manufacturing interest, and frittered away the chance of doing an act of justice to the agricultural class, as witness the reduction of the tea and sugar duties, and the repeal of the shilling duty on corn. Moreover, be it remembered, that when Sir Robert Peel carried the repeal of the corn laws, it was an understood thing with the leading statesmen that the Malt-tax should be given up as compensation to the farmers for the loss of protection; but I regret to say the great majority of the farmers of that time were too

blinded by passion and the hope of recovering protection to see the advantage of this great opportunity, with the exception of Charles Lattimore and a few other leading farmers. In 1846 Lord John Russell said, "If I were Prime Minister when protection to agriculture was abolished the first tax I would repeal would be the Malt-tax." Mr. Cobden said, "We sympathize with the farmers. We will never tolerate one shilling duty on corn, but we will co-operate with them in getting rid of the malt-duty; we owe the farmers something, and we will endeavour to repay them in kind." Again in 1861 he said, "It has often occurred to me to compare the case of a British agriculturist who, after raising a bushel of barley, is compelled to pay a tax of 60 per cent. before he is permitted to convert it into a beverage for his own consumption, with what I have seen in foreign countries, and I can really call to mind nothing so hard and so unreasonable. I am quite sure that the cultivators of vineyards and the growers of olives in France and Italy would never tolerate such treatment of their wine and oil. I could multiply quotations, but sufficient for us to know is that those who stamped the country then, viz., Messrs. Cobden, Bright, and Charles Lattimore (two cotton men and one farmer, when a free trade farmer was a novelty and a lever in the cause), had a perfect understanding upon this point, and could and would have carried it; but, alas, we let the game pass, and have had no chance of repeal since, although Messrs. Gladstone and Lowe, as Chancellors of the Exchequer, have shifted millions of taxation without detriment to the income of the country, and could as easily have shifted the Malt-tax had they been so disposed, aye, and would, let the consequence have been what it might. Had the tax been upon the raw articles of cotton or wool we know from experience it would have been knocked off at once, and I do say, whether the Conservatives or the Liberals are in office, they have always been lukewarm and indisposed to do justice to the agricultural interest by repealing this tax. If it is a good thing and a good system there is as much reason why a similar tax should be extended to all kinds of grain, or, in fact, to all raw material, as well as barley; and, further, there is as much reason why other persons, obtaining a living by the manufacture of other raw material, should pay as heavy a duty, and take out a licence for so doing, as do those who are engaged in the malt and beer trade, and the creation also of other huge monopolies; but, of course, they would declare this to be against the spirit of the age. Then why, let me ask, should not we also benefit by the spirit of the age, and have a free system, and no favour? It is difficult to say anything new upon this question, for the arguments have been so often repeated as to become admittedly an established fact, so that with our opponents it resolves itself into a question of expediency; but should I repeat what others, or what I may have said on previous occasions, I hope it will be received with indulgence by those present. Here let me remark what is right cannot be too often repeated. From Government returns I have in my possession, it is shown that the pressure of the tax falls principally upon the sixteen counties of Beds, Berks, Cambs, Cornwall, Essex, Hants, Herts, Lincoln, Norfolk, Northampton, Notts, Oxford, Salop, Wilts, Yorkshire, and Suffolk, they growing 1,353,911 acres of barley—the remaining twenty-four counties, 609,533—or 744,078 acres more than the twenty-four counties, and more than the twenty-four counties and Wales, Scotland, Ireland, Isle of Man, Jersey, and Guernsey combined by 81,970 acres. Again, the five eastern counties of Essex, Suffolk, Norfolk, Cambs, and Lincoln grow more barley by 149,812 acres than Scotland, Ireland, Isle of Man, Jersey, and Guernsey combined—hence it will be easily understood why we eastern men are Malt-tax repealers, and shows undeniably upon whose shoulders the bulk of the burden rests, and that those who feel it so little are content to have it so. The pressure of the tax upon the producer ranges from £5 to £6 per acre, or from 55 to 70 per cent., according to the price of barley. This tax also disarranges and interferes with the proper rotation of crops, by inducing farmers to grow more acres of other grain and less of barley—*i.e.*, sowing wheat or oats in the barley shift; whereas, if liberty was given to use his barley as he pleases, a much greater demand would spring up for barley of all sorts and quality, which would be more extensively cultivated, less exhaustive to the soil, and more profitable than any other crop. I may be met with the plea of "Let well alone; we make a good price of our barleys—

now, be content; what more do you want?" Well, I want the natural price, be it more or less. I want to use it in the way I think best, without restriction. We do know mathematically that when the duty is taken off any raw article the demand for that article directly increases, a larger consumption takes place, and higher prices are given. Can barley be the exception? No. Our export of ales would and must vastly increase—in fact, there is no reason why the manufacture of ales should not rival in exports that of any other manufacturing business in the kingdom. Those who have tried the export trade on the small scale know something of the vexatious bother and trouble they are put to in obtaining the drawback, becoming as it were suspected individuals and dealers in contraband, repugnant to an honest mind. But for this tax, I see no reason why the best barleys should not equal the price of wheat. The third-rate and inferior barley would go for making into cattle-malt, at the cost of about £5 to £8 10s. per ton. The duty upon the ton of barley is about £6. Here let it be understood that malt prepared for feeding cattle would not suit the brewer, nor is the malt prepared for the brewer adapted so well for the purpose of feeding cattle, the one being placed on the kiln at the commencement of germination, the other after germination has progressed far enough to satisfy the requirements of the brewer, the coombs from which command a price which shows a high appreciation of its feeding value. How much more valuable must the malt itself be if the germination be arrested at the proper time, or, in other words, cooked on the kiln at the time when it contained the largest amount of flesh-forming matter, as proved by Dr. Voelcker's analysis. It is true, Mr. Gladstone tried to meet us in this view by the introduction of his famous malt and linseed mixture bill, but, unlike his claret, it never went down, the process being so complicated, expensive, and open to fraud, as to make it the dearest stuff out. To our cost, unfortunately, we know something of mixed foods, and rather prefer the mixing it ourselves. I do not hesitate to say that if we could malt our corn to suit our purposes we should not only find it the best but the cheapest stuff to mix with our roots for feeding cattle. The foreigner can use it now free of tax, and send his cheap meat here. It is to be also remembered that the barley crop is one of our most expensive crops to produce, costing from £9 to £10 per acre, after which we claim as a right, and ought to have it, the doing as we please with our barleys in these days of open competition. Nor do I see why farmers and those interested in the malting and beer trade should not have the same right to do the best they can with their produce, raw or manufactured, as the manufacturer, trader, miller, and those interested in the flour and bread trade, or any other unfettered article. If it is right for one class of persons to be so fettered, and to take out a licence to do this, that, or the other, so ought other persons to do the same. If licensing is the best way to raise a revenue, then let all persons who traffic or trade take out a licence to follow his calling, and no one ought to complain. Gentlemen, as certain as I see you here, so certain am I that the repeal of this tax would stimulate the farmers to invest more capital in the soil, through them increasing the demand for labour, by which demand alone will higher wages ever be paid and sustained. The general consumer of beer has as much to complain of—and probably more—than the producer, for are not his digestive organs alarmingly practised upon by the adulterated compounds he drinks? creating thirst, and an increasing desire to quench it, which are so often found sold by retailers in the name of beer, made temptingly profitable by the heavy percentages, as shown by Mr. Joshua Fielding, M.P., ranging as it does from 70 to 140 per cent. on the raw article barley, which has not been controverted by official logic. But for this tax malt would be the cheapest article to make ale from—hence adulteration and its attendant evils would disappear. It must be clear to every one that as the maltster in the first instance pays from 60 to 70 per cent. duty upon the raw article barley, to recoup this amount he charges the same interest to the brewer, who also, to recoup the same for himself, charges on, with the additional charges and interest added, to the retailer, who, in his turn, repeats the same mode and charges on to the consumer, until it reaches over 100 per cent., and in a glass of ale we get at the counter, 140 per cent. Added to this, the system creates and fosters, as I have before said, a huge monopoly, which is gradually eating up small maltsters, small brewers, and destroying the good old English

practice of domestic brewing, which in my opinion is the only way of securing pure ale. Hence I say, away with the tax. Let the whole trade be thrown open as free as the air we breathe, and the good old custom of domestic brewing will revive, and the cottager again have his cask of ale in his house, at the cost of 6d. per gallon. Here I am, I fear, treading on tender ground, according to the opinions of our friends the total abstinence believers, who will probably urge what I have many times heard them, viz., that if ale was cheap the vice of getting drunk would increase. I believe, on the other hand, it would be its cure—like the boy in the grocer's shop, who soon gets sick of eating plums, having an unlimited supply before him; so will it be with those who can afford to keep ale in their houses. We know, by experience, the man who does so gets not tipsy on ale, neither would the labourer if he had the same chance, to which I can bear witness as an employer of labour, and my father before me, having been accustomed to see our men brew their sack of malt for harvest beer weeks before the time, keeping it sacred for use in use in harvest—thus proving that temptation can be resisted even with a cask or two of ale in their houses. I have men, I am pleased to say, who are seldom without, and do vouch that I have never seen one of them drunk. Hence, I look upon it as a libel on the true agricultural labourer to say that if they had this right placed in their way they would make an improper use of it. Some people think and say it is not necessary for labourers to drink malt liquor at all, and that they would do their work better without it. Well, it may be so, but the labourer does not agree with their opinions. I am sure if I had such persons in my draining field, and bound them to do their proper quantum of work, they would soon alter their notions and agree with the labourer and Professor Johnston, who says, in "Chemistry of Common Life," "Beer is food as well as drink. A little beef eaten with it makes up the deficiency in gluten, as compared with milk; so that beef, beer, and bread, our characteristic English diet, are most philosophically put together at once to strengthen, to sustain, and to stimulate the bodily powers." Providence has supplied us with this and all other earthly blessings necessary for our use, not abuse, and I cannot bring my mind to contemplate the objections frequently made without thinking it presumptuous professedly assuming to ourselves the position of judges as to the usefulness of these gifts of nature and of God. Were I to get up in any public room and urge the application of the excise laws to the millers, bakers, and those in the flour trade, to the butchers and dealers in cattle, I should be considered a fit and proper person by all my hearers to be placed in a lunatic asylum, and right too. Well, what must be thought of those who help to continue this oppressive and vexatious interference with us? I won't say they are fit, but that they are not fit for such a place, and yet people would say so if the proposition was a new thing. So much are we the creatures of custom and habit that we submit to this huge infliction, to make our sacrifice, like our sheep, yielding up our fleece, year after year, advised to be content, to bear it patiently, and that it is all for our good. I have shown that the bulk of the nearly seven million tax, and its pressure, falls upon and is felt most unfairly by the producers of barley in the sixteen counties of England as against the other twenty-four counties, Wales, Scotland, Ireland, Isle of Man, and the Channel Islands combined; also the pressure upon the individual producers and its indirect evils; also upon the consumer, the muscular labourer being the largest; how it leads to and makes adulteration profitable, tending to vicious habits—we point out the remedy for all this. It is not to the past or to the present we have so much to look at, but to the future. Shall this evil continue? shall it be allowed to grow larger and larger? shall it remain as the last remnant of a fiscal policy declared to be bad by our financial legislation of the past twenty years, utterly at variance with the free-trade principle, which practically gives the right to buy in the cheapest, and sell in the dearest, markets, without let or hindrance, the established axiom of the time? I say, no. The time is coming for justice to be done, not expediency. The Chancellor of the Exchequer can do it if he wills. With a surplus of three millions in his hands, he is in a position to introduce and carry reform to our excise system, and, by a righteous act, earn the lasting gratitude of the millions who have to labour by the strength of muscle and live by the sweat of the brow. Mr. Gardiner concluded by reading some extracts from a report

of the select committee, and by moving the following resolution: "That, in the opinion of this meeting, the Malt-tax is an impolitic imposition which ought to be repealed or commuted in a way which shall not be unfair or injurious to any of her Majesty's subjects."

Mr. A. JOHNSTON, M.P., said: I have very great pleasure in seconding that resolution. I did not know till the moment it was read what it was going to be, and it might very likely have been such a resolution as I could not have seconded, but I am sure there is nothing in it which will not meet with the general approval of all those who may be classed as Malt-tax repealers. Of course, in seconding the resolution, I am not going to follow Mr. Gardiner in all the details he has given us on the subject throughout his able paper. I will just put the question briefly in this way: Why do we want it? How do we want it? and When do we want it? As to why do we want it, perhaps it is superfluous, being as a rule Malt-tax repealers, to go into that point here, but it may be said that we want it on behalf of the farmers, that we want it on behalf of the labourers, and that we want it on behalf, which is stronger than all—of the general public. We want it on behalf of the farmers because the present arrangement of the Malt-tax falls much more heavily on those who grow inferior barley than on those who grow the best kinds, and that seems to me a most unfair and improvident taxation. It is well known that we are not supported by the agricultural interest in this movement so unanimously as we might be, because the growers of good barley to a great extent, I am informed, think, rightly or wrongly, that the abolition of the Malt-tax would be a very questionable benefit to them. Of course they have perfect right to their own opinion, but a tax which, as Coleridge said the Devil did when he visited the earth—a tax which takes from the poor and gives to the rich is a tax that cannot be supported, I think, by a fair-minded man. Well, so much for its injury in that way upon the farmers; but what seems to me the hardest thing of all, though perhaps it may not be so important as the other, is that matter of feeding cattle. It seems to me that our descendants will hardly believe their eyes when they read in history that a tax was imposed which amounted to an absolute prohibition on a large class of manufacturers—for that is what the farmers really are—from using the produce of their own land to feed their own beasts in their own way. Just conceive what would be thought of it in any other manufacture. If you went into a cotton mill or into an iron foundry and said, "You shall do this and you shall do that—you may use this kind of iron when it is in that stage of manufacture, but you must not use it when it is in the next stage of manufacture"—how long would a thing of that kind be tolerated? Would it be tolerated for one moment? Well, this matter has advanced one stage since the last occasion on which it was discussed by this Chamber in my presence—I believe it has been once discussed in my absence. The occasion when I was present was at Saffron Walden, and we then passed a resolution, which I have just been looking at in the report for the year 1870, to the effect that it was very important that farmers should be allowed to germinate their grain for feeding their own animals. Well, we have got that—it is now, I believe, under certain restrictions, allowed; but, as Mr. Gardiner has told you, the mere germination of the grain is not all; it requires arresting at a certain stage, and until we get leave to use that freely and without let or hindrance, we don't obviate that great grievance to the farmers. Well, then, as regards the labourers. It strikes me, and it always has struck me, that this is one of those things that would go to the root of the great desire which all right-minded people have to make the labouring classes of the country sober, keepers at home, and disposed to make the best use of their opportunities for the good of their families and for the good of society. It is well known that they have a strong leaning towards brewing at home. They find that while good beer—good light beer—is brewed by a great many brewers, the stuff they get at too many of the country beerhouses is abominably adulterated, and produces more thirst than it cures, while, on the other hand, what they brew at home—I have sometimes drunk it when I have been out shooting, and I cannot say I like it—possesses this advantage at least, that they know what is in it. They know there is nothing bad in it, and even though they can only brew a very little malt and two or three ounces of hops in an old kettle, still, even under present impositions, they prefer to do that very often, and it is most desirable on all accounts that they should. From them, therefore,

you would hit a very great hindrance and burden in taking off the Malt-tax. And now as to the general public. As your president has said we have seen immense reduction of taxation in the last 20 years, but not one farthing, I believe, during that time has been taken off the Malt-tax. We have seen both direct and indirect taxation largely reduced. Why has not the turn of the Malt-tax come? I think we cannot but expect that any surplus that may occur this year, in the first instance, will be devoted to taking the extra twopence off the income-tax, which was imposed for a special purpose and which was quite understood to be only a temporary thing, but, that having been done, there may be still a surplus this year—if not there will be next—and I cannot see that there is any tax in existence which has such strong claims for alleviation as the one we are now discussing. Rather than keep on the Malt-tax in perpetuity, I would be in favour of keeping on the 6d. income-tax. But I don't disguise from myself that it is very unpopular, and that it would be difficult to induce any legislature by whatever party it might be guided to do that, and I think we had better not attempt Quixotic enterprises, but confine our-elves to what is reasonable and possible. But I think we should insist upon there being no reduction of the income-tax below fourpence in the pound until some very large alleviation, if not a total abolition has been made of the Malt-tax. I have no sympathy with what seems to me the ignorant outcry against the income-tax. It seems to me babyish of people to dislike more the payment of a shilling direct to the tax collector than the payment of 3s. through the medium of tradesmen and people who collect the indirect taxation, because it is a well-known fact to economists that these indirect taxes are excessively wasteful, and that for every shilling they bring to Mr. Lowe they take 3s. out of the pocket of the consumer. No one disputes that for this magnificent sum of seven millions from the malt-tax the consumers of the country pay at least 20 millions. That, I think, is *why* we want this tax repealed. Now with regard to *how* we want it. The last time the question was brought forward in the House of Commons, two years ago, it was brought forward in what appeared to me a mistaken way; it was brought forward, not in the way of abolition, but in the way of transferring it to a duty on beer. Well, I should not object much to a duty on beer. I think the brewers could very well afford to pay it, and it seems to me that the tendency of licensing legislation now-a-days—the inevitable tendency—is to fix and freeze into permanence that monopoly in the sale of liquors which they possess. I do not see how you are to get out of that, and if you are going to increase and strengthen their monopoly, I don't think it would be unreasonable that they should pay something for it. But when I studied this report rather more than three years ago I came to the conclusion that the practical difficulties of exchanging the Malt-tax for a duty on beer were so great that it would not be a wise line for the Malt-tax repealers to take up. Then you have another very great difficulty in the tremendous outcry which would be sure to be raised by all the private brewers if you attempted to place a tax upon them, and it would not be fair, undoubtedly, to lay a tax upon the public brewer which you did not also lay on the private brewer. I, therefore, am against going for the system of changing the duty from malt to beer. Then again, I am against pledging ourselves out and out for total and immediate abolition. I should like to see it of course. So I should like to see the moon cut up into green cheeses when I was hungry; but you have seven millions to deal with, and there never was such a surplus as seven millions, and I hope never will be, because I trust no Chancellor of the Exchequer will ever frame his estimates so far wide of the mark. I think a surplus of three or four millions is a very possible and very reasonable thing, and if he could only get hold of two years such as that, the Malt-tax would be gone. And now as to *when*. I was rather struck with the statement of Mr. Gardiner that he had been upon two deputations to Mr. Gladstone and one to Mr. Lowe. I whispered to my neighbour (Col. Marsden), "Why in the world didn't he go upon one to Mr. Disraeli?" I think that out of the last 20 years Mr. Disraeli was five years, or one whole quarter of the time, Chancellor of the Exchequer. There may have been very good reasons why he was unable to reduce the Malt tax. It is possible—and perhaps my friend on my left (Mr. Round) would tell you that before long—Mr. Disraeli will be again, not perhaps Chancellor of the Exchequer himself, but will have para-

mount authority over the gentleman who will be Chancellor of the Exchequer. That is not my line, but it is possible my friend may be of that opinion and he may be right and I may be wrong. Supposing Mr. Disraeli is, I think it is a great chance for us, and we ought to go in at once. I think it would be very difficult and very invidious for a Conservative government—we don't enter upon party politics here except as far as we can turn them to our interests—our own interest as Malt-tax repealers I mean—it would be very difficult for them to refuse at any rate a very serious consideration of this question, and therefore, having reached my third head, which was the *when*, I think if these changes are coming about which some of my friends are evidently anticipating, we ought also to be preparing ourselves for a long pull, a strong pull, and a pull all together. I have great pleasure in seconding the resolution.

Mr. AMIS HEMPSON did not think the abolition of the Malt-tax would benefit the farmers, but would have a contrary effect. The average price of English barley in that market during the last three months had been 38s. 3d. per qr. During the same period French barley, weighing as much as the English within about 2 lbs. a bushel, and in equally sound and good condition, had been offering on all parts of the coast at 30s. 6d. What made this difference of 7s. 9d. per qr. in value? He believed the principal cause was that the foreign barley paid precisely the same tax as the English, and it did not make so good a malt. If the tax were repealed, he thought more late barley would get into the English markets. He did not believe that the malt-tax explained the decrease in private brewing. Within the last 20 years the number of farmers, tradesmen, and others who brewed had immensely decreased and he supposed it was because they found they could buy better beer than they could make. The great curse of the beer business lay, not in the Malt-tax, but in the enormous monopoly to which reference had been made. It was this monopoly which caused adulteration. It was responsible for the high price of public-houses and the low character of those who kept them.

Mr. J. YOUNGMAN said he was happy to be able to agree with the resolution proposed by Mr. Gardiner. He certainly thought that that gentleman had been very strong—indeed almost conclusive—on the financial part of the question. The subject had also a moral side, and he thought they would be very remiss if they overlooked that moral side. He held in his hand what he considered to be a very able pamphlet on the question by a temperance politician who advocated the repeal of the Malt-tax, and on temperance grounds he (Mr. Youngman) cordially concurred with him. What the writer demanded was, that we should have ample legislative securities against the evils which would certainly flow from an unrestricted sale of intoxicating drinks. He (the speaker) sympathised with the fear which a good many temperance persons felt lest the repeal of the Malt-tax should lead to an additional flow of beer and an increase of drunkenness in the country. Whether in any appreciable degree the home brewing to which Mr. Gardiner had referred would save us from drunkenness, he could not say, but he certainly was prepared to admit that beer at home was a considerable advantage over the habit which many of our working men had gained of going to drink it at a public-house. Still he saw no security at present offered against this increased flow of beer, and should it be much more consumed than it was now at public-houses, it would be a serious injury to the country. We suffered enough from the state of things at present obtaining. He was glad to see that attention was being directed to this part of the question in high quarters. A very voluminous licensing bill had just been brought before the public by one of the members for West Essex (Sir H. J. Selwin Ibbetson), but he could not express any hope that they would derive much good from it, because it appeared to him more a consolidation of the present state of things than a licensing reform. (Hear, hear, from Mr. Johnston). So far as licensing reform might be expected from it, he was afraid it would be a delusion. Now the enormous consumption of grain by its manufacture into beer was a very serious consideration for the country. He listened rather with a smile on his face to the quotation from an old authority who had told them that beer was bread (a laugh), because he believed that no scientific man whose reputation was worth anything in the present day would deny that the conversion of barley into fermented liquor destroyed 90 if not 99 per cent.

of the nutritive properties of the barley (Hear, hear, and "No, no"). If, he repeated, our scientific authorities were worth anything, this was an important consideration, for 1,000,000 bushels of barley per week were converted into malt, and if this was destroyed—(A voice: Yes, if it is!)—the country could not afford anything more in that direction. This consumption of barley in the form of fermented liquors amounted to something like 125,000 bushels a day, and if it was destroyed, why the burning of 500 ordinary corn stacks every night would only about equal that destruction. It was this view of the question which made him rather cautious of the way in which he moved in the repeal of the Malt-tax. He certainly did wish that that tax were repealed, for in that case he should hope that many and good uses for the grain would be discovered. He had seen in South Kensington Museum what appeared to him to be an excellent sugar manufacture from malt, and malt flour might be a form of sugar in many a man's house. He was also aware that a firm of most famous chemists, by the instructions of Baron Liebig, had prepared an infants' food from malt, or at all events malt was one of the leading properties. He would ask this Chamber to help Mr. Bruce, to help Sir Selwin Ibbetson, to help Sir Wilfrid Lawson, or anybody else who desired to save us from the practically unrestricted sale of intoxicating drinks which prevailed at this day, and with that provision he heartily went with the effort for the repeal.

Colonel BRISE M.P., said, I need not tell you that I always have been and am now an ardent Malt-tax repealer. I said many years ago and I say now I would submit to any taxation in order to get rid of this tax upon malt, and I quite agree with my friend Mr. Johnston that if it was a question whether the sixpenny income-tax should be continued this year and the Malt-tax taken off, or on the other hand the income-tax should be reduced and the Malt-tax continued, I should go in for the repeal of the Malt-tax. It does seem to me that we farmers are the only people to whom free trade does not apply, we the farmers of England who suffer from free trade, who underwent privation and suffering—the weakest, we went to the wall—we who went through all this, who sacrificed ourselves for the benefit of the community at large, we, I say, are the only classes who are denied the full advantages of free trade. It seems to me that the evil has increased and is increasing every day. When we first commenced in this county the agitation for the repeal of the Malt-tax it amounted to something a little over five millions, and it has now risen to seven millions of money. I have never heard any really good reasons why this tax should not be repealed. When we have asked for the repeal, what have been the arguments we have been met with? We have first of all been reminded of the old argument of the Duke of Wellington, "How is her Majesty's government to be carried on without this seven millions of money?" We have then been told that beer is less highly taxed at the present moment than any other British liquor—that while spirits are taxed at the rate of 10s. per gallon beer is only taxed at the rate of 2s. 6d. a gallon. Then we are told that if we take the tax off the national beverage of England we must also take the tax off the national beverage of Ireland. Then we are told again that this Malt-tax is the foundation stone upon which the 15 millions of taxation on spirits rests, and we are further told that the principle is wrong—that all taxes should be collected at the point of consumption and not at the point of production. Well then we say if this be the case let us apply a substitute, and we have consented to and are willing to have a substitute in lieu of the Malt-tax. We proposed and it has been generally accepted by the agricultural community that there should be an increase of the licence duty at the rate of 3s. per barrel. That would have brought in something like four million sterling, and then we proposed that the deficiency might be made up by a licence upon private brewers; and although my friend Mr. Johnston has said, and truly said, that this tax upon private brewers was a very unpopular tax—and he was under the impression that it was still an unpopular tax—I yet maintain that at the present time that unpopular tax has very much diminished, and there is not that same objection felt to a licence on private brewing that there would have been some years ago. Not any of these suggestions having been listened to we proposed another alternative, and that was a tax on beer. We suggested that one penny a gallon on beer would raise a sum of four millions, and this at any rate would be a very great assistance in getting rid of the Malt-tax.

Well, what are the arguments we have met with? Why literally and truly speaking I have not heard one single argument ever urged against the transfer of this tax. I listened in vain to my friend Mr. Johnston, hoping that we should have heard from him some good reason against this proposed substitution, but he didn't give us any definite reasons at all. He told us he found great practical difficulty attending it—and we have met with that answer before—but I maintain we have never had any sound, any definite argument against the transfer of this tax. I am one of those who have always been inclined to the notion that the remedy at any rate for some of the evils of the day would be a free trade in beer—that beer might very well be sold over the counter in the same way as tea or any commodity. Lord Derby, Mr. Sewell Read, and many others, for whose opinion I have the greatest respect—men of far keener intellect than my own—are also very much inclined to these same opinions, and Lord Derby, in an address he delivered at Liverpool not very long ago, when speaking on this subject, said it was a policy that was at this moment out of fashion, but it was easier to abuse it than to find any argument against it. In our days the current of legislation seems to be running entirely the other way. The legislation of the day is in favour of a restricted policy, but it does seem to me that the more you restrict—the more you put into the hands of a few this great monopoly—the less guarantee you give to the public that you gain any advantage from it. We talk a good deal about the moral destitution of the present day, and we attribute it—and in a great measure rightly—to the public-house and the beerhouse, but what do we do? Why at the very same time that we make these complaints we do what we can to put a stop on private brewing, and nothing tends more than that to drive the working classes into those very houses. Although we cannot see any chance of making any impression upon her Majesty's Government, or upon any Government at present, I yet hope that our efforts will be attended with success. Mr. Johnston said that no deputation had waited upon Mr. Disraeli upon this question. The reason I believe is that Mr. Disraeli has not held the position of Chancellor of the Exchequer during the time that we have been carrying on this agitation, but whenever Mr. Disraeli does come into office I should be happy to accompany Mr. Johnston or any other gentleman as a deputation upon that subject.

Mr. JOHNSTON said: I must plead guilty to not having given the arguments against the transfer. If I were able to give them it would take too much time. I simply stated that the impression on my mind after reading through that evidence three years ago was that the practical difficulties were insurmountable. I daresay I am wrong, and I hope I am.

Mr. FRIWEE argued that there was no ground for Mr. Hempton's fear that there would be an influx of foreign wheat if the tax were repealed. As an illustration of the value of malt for feeding purposes he mentioned that he recently bought, among other lots, 100 lambs from the west of England. He sent them to his farm at Rettendon. They lost flesh and began to die, although he was quite sure they were sound. He gave them oats and cut hay, but with no good result. He then tried malt, and in less than a fortnight an immense difference was produced, and the lambs were now doing uncommonly well.

Mr. W. BROWN pointed out that it was impossible for the foreigners to make good malt in hot weather. Farmers wanted the natural price for their barley, and they could not get it till the restrictions were taken off. The Malt-tax was equal to three-fifths of the gross rent of all the land the grower occupied, and he did not think there were any other dealers of raw produce who would submit to that. He was in favour of free trade in beer. Many of the lunacy cases at Brentwood, he believed, were caused by the vile stuff now sold. In this business there were three or four men living upon a population of 500 or 600 people. How could they do so if the beer were not adulterated?

Mr. W. MATTHEWS said that three-fifths of the lunacy arose from the free use of intoxicating drinks. He did not think that private brewing among the working classes had decreased on account of want of means, because in some iron towns the working men earned from 30s. to £6 per week. He thought it would be of inestimable value if agriculturists could use their malt for feeding purposes.

Dr. BREE entered a vigorous protest against the unsupported statements of the advocates of temperance. He believed

the statement about drink and lunacy to be quite unfounded, and that there were no statistics to prove anything of the kind. As to the general question, the farmers themselves were not unanimous in demanding the repeal of the Malt-tax, and if seven millions were taken off in this way it would be put upon his and other people's incomes.

Mr. Moss thought it was enough for the farmers to show, as they had shown, that the Malt-tax was an injustice to them, and that they were not called upon to consider the question of a substitute. He was not afraid of the moral consequences of the abolition of the Malt-tax.

Mr. GARDINER briefly replied upon the whole discussion, and, after a few words in support of the resolution from Mr. Frost, it was put to the meeting and carried, no hands being held up against it, although a few members refrained from voting.

Votes of thanks were presented to Mr. Gardiner for his paper, and to the Mayor of Colchester, Mr. Hawkins, for the use of the room.

At a Council meeting, subsequently, it was resolved to ask Sir H. Selwin Ibbetson to introduce the licensing question at a meeting of the Chamber at Dunmow.

SCOTCH HOLDINGS AND ENGLISH CRITICS.

At the dinner after the spring show of the United East Lothian Agricultural Society at Haddington, the Chairman, Lord ELCHO, said: On that and similar occasions politics were tabooed—they were forbidden—rightly forbidden; and therefore he had to find something else whereon to talk. The natural thing would be that he should talk to them on turnips, but though turnips were a green crop, he was not quite so green as to venture to do that. He had no pretensions to be an agriculturist, theoretically or practically, himself, and if he were to begin to talk to them about turnips or any cognate subject, they would soon see that he was out of his depth, and call him a fool for his pains. He should not, therefore, fall into that bog. But some might say—"What an anomaly! A member for an agricultural county, and you cannot talk upon turnips!" He ventured to say that it was of great advantage they should have a member who had got no theories or crochets of his own with reference to agriculture, who could bring a purely judicial mind to bear on all those questions, and listen patiently to the views, projects, and theories of his constituents on all such matters. But although he could not talk of fat beasts, turnips, phosphates, and such like chemicals, he went about with his eyes open, and he could speak of the gradual improvement that one saw going on around him—he could speak of the way in which their enterprise, their capital, and agriculture were storming the hills that separated the county from Berwickshire, so that turnip crops were growing upon land which was a few years ago the property, he might say, of a few wild grouse, snipes, and such wild creatures—he could speak of the steam ploughs, the use of which he saw extending, and of improvements in machinery—he could speak of manual labour giving place to machine labour in the reaping of the crops—and lastly, he could speak to what he saw of improved farm steadings; and he greatly rejoiced to see the improvement that was manifest in the dwellings of the labouring classes. He could speak of these things, and he felt confident that they would agree with him that much of that was owing to the example set by such men as their Lord-Lieutenant, and by societies such as this, which brought tenants and landlords together on that and similar occasions. What he would urge upon the Society was, with a view to their future being as successful as their past, that in all their dealings—whatever might be their individual views as to what should or should not be done in the interests of the Society—whenever any change was necessary, whether brought about by change of circumstances, by change in the modes of locomotion, or by change of locality, these changes should be effected with judgment, with discretion, with temper, and the utmost consideration for all concerned. It was by the utmost cordiality and union prevailing amongst the members as a body that such societies could progress, and that changes could be beneficially effected; and they might depend upon it that it was by gentle means that changes were best effected. They all knew the fable of the contest betwixt the sun and the wind as to which would induce a man first to take off his coat. The rude, boisterous, blustering wind blew its strongest, but the traveller only folded his coat the more tightly around him as a protection from the pitiless storm. But the sun with its gentle beams soon induced him to throw off the coat and carry it over his arm. What he had said as to the action of members of this society he would also impress on every one who heard him with reference to their individual actions in their relation to each other. What he would earnestly hope

was, that on every possible occasion in this county, and throughout the length and breadth of Scotland and Great Britain, landlords and tenants might meet each other in the most kindly, friendly, and sympathising spirit, and in all their dealings act towards each other with kindness and consideration. But he dwelt upon that at the present time on this ground—we lived at present in peculiar times. There were elements—he would not call them forces as yet—which showed themselves at the bottom of society, and might some day, if they found ready material for their action, split what was called the social fabric from top to bottom, and overthrow it. He had been recently in France, and seen the effects of that force and those elements of disorder or revolution, or whatever they chose to call it, in the fair city of Paris, devastated and destroyed, with all its public buildings burned and blackened. Although he hoped and believed that in this country elements such as these existed, if they existed at all, in a very slight degree; still, how was such an element as that, which took as its basis the doctrine of the *prophome* that all property was theft, and that every man who had a decent coat on his back and had more than his neighbour was a robber—for that was what is meant in plain English language—how was such an element of danger and force to be combated with but by the union of all classes in this country, by that consideration for each other, and by that kindness of human sympathy, which was the real and true bond of all human society? That was what he would impress upon this society in their individual as well as in their aggregate capacity. They lived also in days of trades' unions. He should like to see agricultural trades' unions—not the trades' unions of landed proprietors, of tenants, or of labourers, but all three in one. For depend upon it, it was by such a union as that that they could best combat those doctrines and those forces to which he had referred, which, if they ever got the upper hand, would draw no fine distinctions between capital and land, between the profits of the farmers and the rents of the landlords. It would upset everything in the shape of stability and prosperity in this country. He should like, therefore, to see an agricultural union, a union of all concerned in that great industry in which no one had greater interest than himself. He should like to see it a union not only of hand but heart; and in proposing to them "Prosperity to the East Lothian Agricultural Society," he earnestly and fervently prayed that the trades' union motto might be the motto of the Society, and that in the union of all its members might be its strength.

Mr. HARVEY proposed the health of the Vice-Presidents, coupling with the toast the name of the Right Hon. Nisbet Hamilton, one of the most popular members, who had had long experience in agricultural matters, not only in Scotland but in Lincolnshire.

Mr. NISBET HAMILTON said he felt very much surprised and astonished at seeing, in the course of last year, in the *Journal* of the Royal Agricultural Society of England, very extraordinary allusion made, not only to the tenants, but to the landlords of this county in particular, and to Scotland in general. Now, in reading that article, any person who was not acquainted with the district would suppose, in the first place, that the tenantry of East Lothian were the most miserable, poverty-stricken individuals, and that the landlords were the greatest possible skin-flints, living on the capital of the tenants, and exacting the highest possible rents for the produce of the land. He only wished that the compiler of the

article had made a more accurate inspection of the farms and the condition of the tenants in this district. He only wished he were here to-day to witness the present meeting, and he (Mr. Nisbet Hamilton) was sure he would have been very much astonished to find not only that the tenant-farmers of East Lothian were, in proportion to the extent of the district which they occupied, the most substantial tenantry, not only in Scotland, but in any part of the United Kingdom. He was not called upon to stand up exclusively for the defence of the vice-presidents—the landlords of the district—but he must say that unless they resided on their estates, unless they took an interest in those who occupied their land, they would neither see the same prosperous class of tenants in this district, or amongst the labourers the same happy and contented condition in which they now were. The thing appeared to him so great a libel that he was almost prompted to take public notice of it at the time, and as this was the first public occasion he had had to make these remarks he did not think he would have been doing his duty to the landlords and the tenants of East Lothian, and the tenants of Scotland generally, if he had not taken notice of what he called a downright libel, and nothing else. They would observe that, in common with his noble friend on his right (Lord Eleho), he bore witness to the increasing prosperity of the farmers, the increasing industry of the labourers, and to the sympathy which the landlords entertained with all those who were connected with them in relation to agriculture.

Mr. GEORGE HOPE (Fentonbarns) said they might be all aware that the gentleman who wrote the paper referred to by Mr. Hamilton was staying with him; and what he said arose from a journey through the county which he (Mr. Hope) took with him. They were discussing at the time the propriety of leases, or of Lincolnshire Tenant-Right, as it was called in England. On turning to one farm, he (Mr. Hope) observed that he had seen seven tenants on that farm during the last fifty years. The gentleman was much struck with that remark, and he (Mr. Hope) then told him that he had seen four, five, six, and that, on the average, he had seen at least three tenants on every farm in the county, and that there were only about twenty farms in the county in the hands of the same families.

The gentleman put it down that the people were not able to sit out their leases, which was not the case, as other causes were in operation; and he thought it a pity that the writer did not let him see a proof of the article before it was published with his (Mr. Hope's) name mentioned in it. But every word he told the writer was quite true, and capable of being proved. Seeing that his name had been used in connection with the article, he repeated that, as far as he gave the information to the gentleman, it was thoroughly consistent with fact.

[The *North British Agriculturist*, of Wednesday last, "understands that Mr. George Hope, Fentonbarns, has received intimation from Mr. Nisbet Hamilton's factor that the lease of Fentonbarns is not to be renewed." The same journal says: "There are several individuals resident in the county who could, were they so disposed, state facts which would clearly establish that farming, after the collapse in the prices of agricultural products which occurred at the termination of the war with France, and especially after the year 1822, had been anything but a profitable business, and had for many years proved most disastrous to those engaged in it—in fact, for ten years after 1822 farming was so unprofitable that there were few solvent tenants in the county in 1832. The tenants did not, as a rule, maintain their position as farmers, and comparatively few members of their families are now following agricultural pursuits in the county. We assert that were a history of the farmers of the county written, either in reference to estates, parishes, or districts, it would show an amount of disaster almost unparalleled in the business of farming. It is well known that during the crisis landlords, by means of the most unjust law of hypothec, generally secured their rents, frequently at the expense of the ordinary creditors, whose claims were set at naught; while the same law indirectly encouraged, and continues to encourage, proprietors to let farms to the highest bidders, without much inquiry as to their capital and other qualifications to render them eligible tenants. Since the cultivation of the potato has been extensively gone into, and the fattening of cattle and sheep more generally practised, farming has been more prosperous, although there have been several cases of the sudden termination of leases."]

THE DOCTRINE OF RENT.

At a meeting of the Manchester Statistical Society, last week, Mr. Mill in the chair, Professor Bonamy Price, Oxford, read a paper on the Doctrine of Rent.

Professor PRICE said that the doctrine of rent had hitherto been regarded as one of the most brilliant triumphs of economic science, and to be lifted so far above the reach of criticism, that to challenge its accuracy appeared almost as presumptuous as to dispute the validity of the first propositions in Euclid. Nevertheless, he ventured to submit that this very pretension to convert the doctrine of rent into a foundation for claiming for political economy the character of a deductive science, furnished ample ground for re-examination of that doctrine. The theory of rent was not a product of deductive reasoning. It was a complex fact of the outward, concrete, material world; it must be studied in its objective and actually existing form before its nature could be ascertained. Thus the science of rent, if there were one, stood on the same identical ground with chemistry or any other acknowledged analytical science, and was therefore perpetually open to re-examination. Rent might be defined as the consideration paid for the loan of land; and in political economy the expression was usually limited to the hire of agricultural land. A tenant proposed to take a farm from a landlord, and the amount of the rent was debated between them. What were the considerations which governed the calculations on both sides? The sole calculation which the farmer made was on what terms he would be able to get a living out of the farm. In this calculation he would not compute how much the landlord had expended on the farm, nor would the landlord be able to force such a consideration upon him. The determination of rent did not belong to the landlord, but to the tenant. The practical problem always was, what the tenant conceived he could afford to give for the farm. The fertility of the soil was one chief

element of the arithmetic employed by the farmer, but it was not the sole one, and very often, indeed, not the dominant one. The overwhelming importance assigned to the relative productiveness of the land was the capital mistake which he was compelled to lay to the charge of most political economists in their exposition of the theory of rent. The question arose—is it true, as the fact which is to serve as the foundation of the theory of rent, that rent rises and falls with the relative fertility and productiveness of the soil? What would be a deliberating tenant reply? If every other circumstance were the same, he would proportionate the rent; he would pay according to the exact variations of the fertility of the land; and, as on a single farm most of those other circumstances were generally the same, he would estimate the rent which each acre would bear by the goodness or badness of the land. But even here some disturbing forces would occasionally make their appearance. There might be fields particularly well suited for accommodating animals in the neighbourhood of fairs and markets. A tenant would take account of this circumstance in his mind, and so, also, would the landlord; and so, as an actual fact, a portion of the farm would be let for a rent not proportionate to the relative fertility alone. If they passed beyond the boundary of the single farm, the disturbance created by the accessory circumstances became more striking. A farm on the light lands of Surrey might produce the identical crop of corn which was obtained from a farm on the adjoining strong clays of Sussex; but the one farm would require but few horses for its cultivation, while the other would demand many. A tenant-farmer would therefore consent to pay a higher rent for Surrey than for Sussex land, because the expense of tillage would be much smaller in one case than the other. A wider survey, which would include the corn fields in the broad regions of Western America and Australia, would

confirm these observations. Among other elements affecting rent, Professor Price proceeded to quote cheapness and facility of transport, and the pressure of parochial rates and tithes. Lands tithe-free always yielded a larger rent under equal circumstances than those subject to tithe. That fact of itself was a demonstration that a doctrine which made the relative fertility of the soil the essence of rent was only a partial summary of the elements of the problem, and therefore an inadequate and unscientific theory. When the other forces which acted on rent were equal, then, no doubt, fertility of the soil was the regulator of rent; but these forces varied without limit, and by varying they modified, enlarged, diminished, or not unfrequently extinguished rent altogether. A man purposing to become a tenant of land, if he were a skilful farmer, would combine various elements together, and come to an opinion as to the capacity of the land, to be grateful for the capital laid out in its culture; and, assuredly, on that very ground he would prefer to pay a high rent for good land rather than a low rent for poor land. Still, the two considerations were distinct in themselves, and in the estimate he made of the power of the land to repay high farming, the cost of the improved cultivation in that particular locality would carry great weight in his ultimate judgment. A consideration of all the facts was necessary to a theory of rent which could claim to be scientific. Rent was the consideration given for the loan of a wealth-producing machine. The consideration was determined not by the cost of constructing the machine, but by the excess of profit which the employment of that instrument would yield after repaying the expense of cultivation, including the ordinary reward of the tenant's labour, skill, and capital. That there was such a surplus was decided by the fact that the selling price of the produce of the machine exceeded the profits. It succeeded for carrying on the agricultural as well as other kinds of business. That excessive price sprang from the insufficient supply of an article which was indispensable for human life. The deficiency must be made up from other sources more distant or more difficult to procure. This theory of rent was scientific, because it took account of all the facts, and placed them in their proper relation to each other. But it was scientific in a very different manner from the much-vaunted theory which had been so groundlessly made the pride of political economy. He could not conclude his paper without saying a few words on the term "monopoly" which had been so freely applied by some political economists to the possession of land. He protested against the use of so invidious an epithet. The word "monopoly" suggested a wrongful and odious usurpation; it was a restriction created by the law in the carrying on of a particular trade in favour of individual citizens, to the exclusion of the rest of the community. Such a preference was by its very nature unjust, and wrought immense mischief by the inferiority of the goods thus produced and their dearness. He held it to be most unfair to insinuate by the use of the word that the possession of land had any affinity whatever with those artificial and justly-condemned preferences and restrictions. Mr. Mill justified the expression by adding to it the word "natural;" but the sting, which was inseparable from the word "monopoly," remained all the same. The arbitrariness with which it was applied in the case of land would be seen if they thought of the many natural advantages of the same general character with those belonging to land, to which no one ever thought of attaching the word "monopoly." The skill and eloquence of a great barrister, the art of an eminent brewer, the talent of a distinguished writer, and endless other personal gifts, were natural monopolies in precisely the same sense as land—and who ever thought of fixing such an invidious name upon them? Yet they resembled the possession of land in the distinctive quality that they enabled their possessors to raise considerable sums of money out of the community. But it was said they were subject to competition, and that anyone might rival or surpass them if he pleased. He should rather say "if he could or he could not," because they were supposing these monopolists, to apply Mr. Mill's words, to possess the highest existing advantage. But equally subject to competition were the owners of rent. The possession of agricultural land was distinctly free from the vices of a genuine monopoly. It neither raised the price nor deteriorated the goods produced. It was perfectly open to Mr. Mill and those who shared his feelings to propose that the present landowners should be paid off, and that the state should be the

one sole landowner in the nation. Whether that would be a wise or a mischievous policy was fairly open to argument. So was Communism. Communists might rationally discuss whether it would not be expedient that Mr. Mill should devote his great talents to the service of the Commonwealth, and accept equal remuneration with the citizen who carried bricks for the builder. But in neither discussion could the idea of monopoly enter. It might be determined that the nation would reap great benefit from great abilities being allowed to exert themselves for the benefit of their possessors, and that private property in land would be more advantageous than public property in land. If such were the decision, the private owner, who, either through his predecessor's or his own efforts, had developed the wealth-producing power of the machine, was no more to be branded with monopoly than the great author who had so cultivated the gifts with which nature had endowed his mind as to realise large pecuniary results from the sale of his writings.

Professor JEVONS said he concurred with great pleasure in Professor Price's remarks upon the necessity of continually reconsidering what seemed to be the best-ascertained principles of political economy. He believed the theory of gravitation had been called into question many times during the last century, and he thought that it was of the utmost importance that the principles of political economy should be constantly brought into revision. He was certainly inclined to agree almost entirely with the view ultimately taken by Professor Price, that there were a great number of circumstances to be taken into consideration before they could estimate the rent of land. Doubtless he was right in saying that it was a bargain between the landlord and tenant. The question was whether the term "fertility" was extensive enough. If fertility was to be measured simply by the amount of corn the land would grow, then it was not sufficient. Might they not sum up under the term "the general advantages." The question was what the tenant made out of the land. If he could get a higher price for his corn he would not mind having a less quantity. It was simply a matter of money to him. He would like to suggest whether they might not carry the meaning of the word "rent" still further. He could not see that any principle which acted in the case of other machines might not also act in the case of land. He did not know whether there was land in England which paid no rent; but in travelling in Wales from Festiniog to Bala he saw 15 miles of almost desert land, and he wanted to know whether such land could be cultivated. It was an important question to decide. He was travelling through Derbyshire the other day, and he saw a considerable portion of moorland uncultivated. He thought it was probably incapable of cultivation, but on going a little further he was surprised to find a number of green fields, many of which were higher than the moor land. A farmer told him that this moor land was quite capable of cultivation, and if there were no game it would soon be cultivated. He thought this question of game stood much in the way of cultivation in England.

The discussion was continued by Mr. Helm, Mr. John Watts, Mr. Alfred Neild, the Chairman, and others.

WARWICKSHIRE CHAMBER OF AGRICULTURE.

—At an ordinary meeting, Mr. J. Ford in the chair, Mr. Startin proposed: "That, as it appears from the statement of Mr. Winterbottom that the Government will not introduce any Highway Bill this session, and that, consequently, the cost of repairing any turnpike roads on which the trusts are and will be discontinued must be paid out of local rates, this Chamber is of opinion that the urgent attention of Parliament should be called to the justice of continuing all trusts until an equitable means of maintaining the roads be provided." Mr. Caldecott seconded the proposition. Mr. Horley proposed as an amendment: "That the delay which has taken place in bringing forward any Government measure for dealing with the turnpike roads and highways throughout the country, and settling the cost of repairs on some permanent basis, is an injustice that requires the immediate attention of Parliament." This was seconded by Mr. W. Palmer; but, on a division, it was lost, and the original proposition carried.

THE AGRICULTURAL RETURNS OF GREAT BRITAIN FOR 1871.

The earlier publication of the returns in detail has been often referred to in these reports, and no effort is spared in the departments which collect and prepare the returns to obtain so desirable a result. The work of completing, checking, and arranging the large amount of detail collected throughout the country by the officers of Inland Revenue is still found to require a considerable amount of time; and the subsequent additions and computations, not only as regards the returns for Great Britain but also those for the Colonies and Foreign Countries, are not a light task. But the officers employed to obtain the returns are seriously delayed in their work by the refusal of a minority of the farmers to answer a few simple questions, notwithstanding in many cases repeated personal applications upon the part of the officers.

The returns are studied and valued by an increasing number of agriculturists, who would no doubt appreciate the advantage of obtaining the information contained in the returns at the earliest practicable period, and it is to be regretted that the facts collected cannot as yet be earlier available.

The total number of returns obtained from occupiers of land in 1871 was 549,784, against 529,150 in 1870. The increase was for the most part in England, for which the figures were 412,284 in 1871, and 393,569 in 1870. In almost every county of England more returns were obtained in 1871 than in 1870, and the increase is due to various causes, such as a greater number of separate returns from occupiers, with more than one farm situated in different parishes, the subdivision of land in the neighbourhood of towns, and in some places a stricter collection of returns from holders of small quantities of land above the limit of a quarter of an acre.

The agricultural returns for 1870 included a classification of the number of holdings, according to the extent of land occupied. This information is not repeated for 1871, as it is a work of some labour to the collecting officers, and the results would not be very different in two years. Instead, however, of obtaining again the division of the holdings according to size, the officers of Inland Revenue were instructed to tabulate separately certain particulars from the returns made by occupiers of less than twenty acres of land. The number of this class of holdings was required to be stated, with the acreage so held under tillage and grass respectively, and the number of each kind of live stock possessed by the occupiers. The result shows, that of 549,784 returns obtained in 1871, 281,920, or 51 per cent., were from occupiers of less than 20 acres of land. In England 51 per cent. of the holdings were under 20 acres, in Wales 46 per cent., and in Scotland 55 per cent.

The total acreage returned for holdings under 20 acres was 1,897,984 acres for Great Britain, or 6 per cent. of the acreage returned for holdings of all sizes. Of the 1,897,984 acres, 830,223 acres, or 44 per cent., were under tillage, and 1,067,761 acres, or 56 per cent., were under permanent pasture. The live stock returned as belonging to occupiers of less than 20 acres, consisted of 109,029 horses out of a total of 1,254,450; of 582,555 cows and cattle out of a total of 5,337,759; of 1,444,041 sheep and lambs out of a total of 27,119,569; and of 502,789 pigs out of a total of 2,499,602.

It will be interesting to see, so far as relates to the particulars just described, to what extent the smaller and larger classes of holdings differ in their agricultural condition and resources. Thus, of the total acreage returned by the two classes of holdings in Great Britain, holdings under 20 acres had 44 per cent. of the acreage under tillage, and 56 per cent. under permanent pasture; and holdings of and above 20 acres had 61 per cent. under tillage, and 39 per cent. under permanent pasture. As regards live stock, the proportionate numbers to every 100 acres were—horses, 5·7 on holdings under 20 acres, and 4 on holdings of and above 20 acres; cows and cattle 30·7 on holdings under 20 acres, and 16·4 on holdings of and above 20 acres; sheep and lambs 74·5 on holdings under 20 acres, and 88·8 on holdings of and above 20 acres; lastly, pigs 26·5 on holdings under 20 acres, and 6·9 on holdings of and above 20 acres. The difference in the number of sheep upon the two classes of holdings in Great Britain is affected by sheep

being rather numerous in the small holdings in the hilly parts of Great Britain or in Wales and Scotland. In fact, as regards Scotland, from the large proportion of the acreage of the small holdings which is under tillage, and the large number of sheep returned by the occupiers of small holdings, it is probable that the occupiers in certain of the Highland counties, especially in Argyle, Inverness, and Ross, have access to mountain pasturage for their sheep in addition to the land held and returned by them as occupiers. In England the proportions for sheep per 100 acres are, upon holdings under 20 acres, 32·7, and upon holdings above 20 acres 76·5.

The larger proportion of cattle, and the smaller proportion of sheep in the small holdings, as compared with large holdings, is clearly shown by these figures, and the same fact has been before noticed in regard to the relative number of different kinds of live stock in countries with a preponderance of small holdings of land.

The general results of the agricultural returns for 1871 are shown for each division of the United Kingdom in the first two tables, the Registrar-General for Ireland having furnished the particulars relating to that portion of the kingdom. The figures obtained for the Isle of Man and the Channel Islands in 1870 have been taken again, in the absence of fresh returns, in making the total for the United Kingdom in 1871. The total acreage returned as under all kinds of crops, bare fallow, and grass in the United Kingdom in 1871 was 46,667,178 acres, against 46,177,379 in 1870; of the additional 489,808 acres in 1871, 430,988 acres appear in the returns for Great Britain, and 58,820 acres in the returns for Ireland. Taking the population as ascertained by the last census in April 1871, and the total acreage returned as under crops, bare fallow, and grass in 1871, it would appear that the quantity of land under cultivation per head of the population was about 1·2 acres in Great Britain and 2·9 acres in Ireland. It is probable, however, that a larger proportion of poor herbage is included under the heading of "Permanent Pasture," in Ireland than in Great Britain. According to the returns of 1871, which show a total acreage under cultivation of 30,838,567 acres in Great Britain and 15,711,398 acres in Ireland, the quantity of land devoted to the different kinds of cultivation was—for corn 9,675,261 acres, or 31·4 per cent. in Great Britain, and 2,124,079 acres, or 13·6 per cent. in Ireland; for green crops (including potatoes) 3,738,180 acres, or 12·1 per cent., in Great Britain, and 1,511,532, or 9·6 per cent., in Ireland; for bare fallow 542,840 acres, or 1·8 per cent., in Great Britain, and 22,323 acres, or 0·1 per cent., in Ireland; for clover and other grasses under rotation 4,369,448 acres, or 14·2 per cent., in Great Britain, and 1,827,733, or 11·6 per cent., in Ireland; and for permanent pasture 12,435,442 acres, or 40·3 per cent., in Great Britain, and 10,068,848, or 64·1 per cent., in Ireland.

Before proceeding to state the acreage under the several kinds of corn and green crops, it may be observed that some additional information was obtained in 1871 with respect to the quantity of land in Great Britain occupied by orchards and woods. As regards orchards, no additional acreage is brought under notice, as the land appropriated to the growth of fruit trees, being under tillage or grass, has been returned as under crop or in pasture. The agricultural fruit crop, as it may be termed to distinguish it from the garden fruit crop, which is not ascertained, was returned as occupying as many as 206,583 acres in Great Britain in 1871. Of this total acreage under fruit trees of any kind in orchards, 176,685 acres were in England, 23,933 acres in Wales, and 6,865 acres in Scotland. The counties in England with the largest acreage under orchards are Devon with 30,913 acres, Hereford with 20,811 acres, and Somerset with 16,267 acres.

In the case of land under woods, the extent has been ascertained of a not unimportant portion of the area of Great Britain not used for the ordinary purposes of agriculture. The acreage of woodland was ascertained by the officers of Inland Revenue employed to collect the agricultural returns from the best sources of information available in their respective districts. A column for this information could not have been

usefully added to the form issued to occupiers of land, as woods are not often held by farmers. The result of the special return for woods, coppices, and plantations (excepting gorse land and garden shrubberies) shows a total acreage so occupied in Great Britain to 1871 of 2,175,471 acres; of which 1,314,316 acres were in England, 126,625 acres were in Wales, and 734,530 in Scotland. For Ireland, the Registrar-General returns an acreage of 324,255 acres us under wood.

With the view of obtaining further information respecting the unaccounted-for acreage of the country, inquiry was made as to whether it would be practicable for the officers of Inland Revenue to ascertain the extent of commons and unenclosed waste land; but it did not appear that it would be in the power of the officers to obtain satisfactory particulars of this description of land. It may, however, be useful to show how probable it is that there is not so large an amount of land in the United Kingdom still available for profitable cultivation as may generally be supposed. Between the total acreage of the United Kingdom and the total of the acreage for which agricultural returns are obtained, there is a difference amounting to more than 30 millions of acres, of which there are nearly 9 millions in England, about 2 millions in Wales, as many as 15 millions, or one-half of the total in question in the hilly country of Scotland, and about 1½ millions in Ireland. From the best estimate that can be made, based upon a Parliamentary return prepared by the Tithe Commissioners in 1863, it would appear as probable that there are now about seven million acres of waste land of all descriptions in England and Wales. If this quantity be deducted from the total unreturned acreage of eleven millions, four million acres remain as occupied by water, railways and roads, woods, and towns and villages. A very large portion of the seven million acres of waste land is known to be unproductive mountain land; it is, however, believed that in the lowland counties a considerable quantity of waste land yet remains available for profitable cultivation, but not to the extent that may be commonly supposed.

As to the extent of land under the principal corn and green crops, it has been ascertained that in 1871, of a total acreage under corn crops of 9,675,261 acres in Great Britain (exclusive of the island), and 2,124,079 acres in Ireland, there were under wheat 3,571,894 acres, or 36.9 per cent., in Great Britain, and 246,954 acres, or 11.6 per cent., in Ireland; under barley, 2,335,783 acres, or 24.7 per cent., in Great Britain, and 222,604 acres, or 10.5 per cent., in Ireland; under oats, 2,715,707 acres, or 28.1 per cent., in Great Britain, and 1,633,960 acres, or 76.9 per cent., in Ireland; under rye, 71,495 acres, or 0.7 per cent., in Great Britain, and 9,617 acres, or 0.5 per cent., in Ireland; under beans, 549,835 acres, or 5.6 per cent., in Great Britain, and 9,549 acres, or 0.4 per cent., in Ireland; and under peas, 389,547 acres, or 4 per cent., in Great Britain, and 1,365 acres, or 0.1 per cent., in Ireland.

The total acreage under green crops (including potatoes) amounted in 1871 to 3,738,180 acres in Great Britain (exclusive of the islands), and to 1,511,532 acres in Ireland. These quantities were divided between the several crops in the following manner: Under potatoes 627,691 acres, or 16.8 per cent., in Great Britain, and 1,058,287 acres, or 70 per cent., in Ireland; under turnips and swedes 2,163,744, or 57.9 per cent., in Great Britain, and 327,162, or 21.6 per cent., in Ireland; under mangold 360,517 acres, or 9.6 per cent., in Great Britain, and 31,766 acres, or 2.1 per cent., in Ireland; under carrots 20,154 acres, or 0.5 per cent., in Great Britain, and 4,167 acres, or 0.3 per cent., in Ireland; under cabbages, kohlrabi, rape, collectively, 178,919 acres, or 4.8 per cent., in Great Britain, and 43,543 acres, or 2.9 per cent., in Ireland; and under vetches, lucerne, and any other green crop (except clover or grass) 387,155 acres, or 10.4 per cent., in Great Britain, and 46,607 acres, or 3.1 per cent., in Ireland.

Passing now to the number of live stock returned in 1871, it may be stated that the total number of horses in the United Kingdom was about 2,648,000, of which Great Britain possessed (including horses subject to duty) 2,110,590, and Ireland 537,633; the total number of cattle was 9,356,216, of which 5,337,759 belonged to Great Britain, and 3,943,102 to Ireland; the total number of sheep was 31,403,500, of which there were in Great Britain 27,119,569, and 4,228,721 in Ireland; and lastly, the stock of pigs included in the returns amounted to 4,136,616, of which Great Britain had 2,499,602, and Ireland 1,616,754.

The proportionate number of each description of live stock

to every 100 acres of land returned as under crops, fallow, and grass, differ much, especially as regards cattle and sheep, in the several divisions of the kingdom. In 1871, horses, to every 100 acres returned, show a proportionate number in Great Britain of 4.1 for those used in agriculture, and of 6.8 if those subject to duty are included; and in Ireland all description of horses are in the proportion of 3.4 per 100 acres, or just one-half of the number maintained upon an equal acreage in Great Britain.

Cattle in proportion to every 100 acres, numbered 15.5 in England, 22.9 and 23.7 in Wales and Scotland respectively, and 25.3 in Ireland. Sheep were returned for every 100 acres as numbering 73.9 in England, 103.9 in Wales, 152.4 in Scotland, and only 26.9 in Ireland. Pigs (exclusive of those in Great Britain kept in towns and by cottagers with less than one-quarter of an acre of land) show for every 100 acres 8.8 in England, 8.7 in Wales, not more than 4.3 in Scotland, and 10.2 in Ireland. Pigs do not appear, therefore, to be a favourite description of stock in Scotland. With a very much larger acre of acreage, the stock of pigs is smaller in Scotland than in Wales.

Comparisons of the relative number of live stock are of interest in connection with the fact of so much importance in agriculture that the productive capacity of the land cannot be increased or even maintained without the restoration by means of manure of the elements withdrawn by the crops. With figures like those for the whole country, and for each county, as given in Table No. 3, farmers have the means of comparing how far the number of their own live stock and their supply of home-made manure corresponds with similar resources in different parts of the country.

The differences in the extent of land under the various crops in 1871 as compared with one or two previous years may now be noticed. All kinds of corn crops (including beans and peas) were grown in Great Britain upon 127,000 acres more in 1871 than in 1870, but the corn acreage in 1871 was not equal to what it was in 1869. In Ireland the acreage under corn crops in 1871 was about 50,000 acres less than in 1870, and 83,000 less than in 1869.

The acreage under wheat shows less variation between 1871 and 1870 than it did between 1870 and 1869. There was a falling off of nearly 200,000 acres in 1870, but in 1871 about 71,000 more acres were under wheat in Great Britain than in 1870. There was a small decrease in the wheat acreage in Ireland in 1871 as compared with 1870. Only 11.6 per cent. of the total corn acreage was cultivated with wheat in Ireland in 1871, as compared with 43.1 per cent. in England, 22.5 per cent. in Wales, and 9.3 per cent. in Scotland.

The acreage under barley in Great Britain, in 1871, shows only an increase of 14,000 acres as compared with 1870, but in that year there was a large amount of land under that important crop, showing an increase of 120,000 acres over 1869, and of 220,000 acres over 1868. In Ireland, in 1871, there was a decrease of 20,000 acres in the land under barley; but the growth of this grain has increased in Ireland in recent years.

Although a large quantity of land is still used for the growth of oats both in Great Britain and Ireland, it appears to be a crop the cultivation of which is gradually diminishing in England and Ireland. There were 62,000 fewer acres under oats in the United Kingdom in 1871 than in 1870, 47,000 of the diminished acreage being in Great Britain, and 15,000 in Ireland.

The acreage in Great Britain under beans shows an increase of about 11,000 acres in 1871 over 1870, and the acreage under peas an increase of 72,000 acres between the same years, which nearly makes up for the falling-off in 1870 as compared with 1869.

The total acreage of land returned as under green crops in Great Britain, in 1871, shows a considerable increase over 1870, the difference amounting to 151,000 acres in favour of 1871. This increase becomes more important, perhaps, from the fact that although the acreage under green crops in 1870 and 1869 did not vary much, it was, in both of those years, largely in excess of what it was in 1868 and 1867. The first in the list of the separate green crops is potato, and 40,000 additional acres were planted with that crop in 1871, as compared with 1870, but the prevalence of the potato disease has greatly interfered with a larger supply of so important an article of food. In spite of bad crops, the cultivation of potatoes has increased

in Great Britain in each year since 1867, over which year the returns for 1871 show an increase of 135,000 acres, or 27 per cent. In Ireland, the land under potatoes was more by 15,000 acres in 1871 than in 1870. The acreage devoted to the growth of turnips and swedes in 1871 shows a decrease, as compared with 1870, to the extent of 47,000 acres in Great Britain. In Ireland, the falling-off in the acreage under turnips in 1871, as compared with 1870, was 12,000 acres.

The decrease in the acreage of the turnip crop was made up by a larger crop of mangold, with which 54,000 more acres were sown in Great Britain in 1871 than in 1870. The extended cultivation of mangold in Great Britain is strikingly marked by an increase in five years, from 1867 to 1871, of 102,000 acres, or nearly 40 per cent. In Ireland, the cultivation of mangold is but on a small scale at present, but it shows a marked increase. Carrots and cabbages, as agricultural crops, are not extensively grown, and do not show much change as regards acreage. Kohl-rabi, the nutritious properties of which are highly spoken of, is becoming more important as a root crop in Great Britain, especially in the driest counties. The increase of the acreage of the crop in 1871 over 1870 was 16,000 acres, and the total acreage used for kohl-rabi has advanced from 13,000 acres in 1868 to 39,000 acres in 1871. Rape was grown as a green crop to a larger extent in 1871 than in 1870 by 14,000 acres in Great Britain; and vetches or tares, which are sown upon a considerable breadth of land in Great Britain, show a larger acreage in 1871 than in 1870 by 56,000 acres. The acreage at present returned as under beetroot in Great Britain is not important. In 1871, in the collecting forms, the heading for beetroot was divided so as to ascertain the quantity grown for sugar and not for sugar. Only 1,884 acres were returned as cultivated with beetroot for sugar, and 1,707 acres not for sugar.

There was a check to the cultivation of flax in Great Britain in 1871. The acreage under that crop had increased both in 1869 and 1870, but the returns for 1871 show only 17,366 acres under flax, about the same as in 1868, and 6,591 acres less than in 1870.

The acreage under hops in Great Britain continues below what it was a few years since. In 1869 there was a marked decline in the number of acres returned as planted with hops; in 1870 there was a further small decrease; and the total of 60,030 acres for 1871 is a little less than the acreage in 1870. It is perhaps worth the consideration of farmers in some counties where hop-planting has not hitherto been introduced whether it might not be successfully tried.

The quantity of uncropped arable land, or land left under bare fallow, is now returned as considerably less than it was when these returns were first obtained. A large part of the decrease is owing to the right description of land being more generally entered in the forms issued to the occupiers of land. But a change in the course of cultivation pursued has probably also had some effect in the reduction of the acreage under bare fallow. The quantity of land so returned in 1871 was smaller by 67,000 acres than in 1870.

The total acreage under clover and grass, under rotation, was less in 1871 by 135,000 acres than in 1870; but the quantity of land returned as under such kinds of grass in 1870 was largely in excess of what it was in 1869. The distinction between grass under rotation and permanent grass has not been similarly understood by farmers in different parts of the country, and that is partly the cause of variations in returns for grass lands; but it is believed greater uniformity in this respect is now observed. Although the total number of acres under clover and grass under rotation shows a falling off in 1871, the quantity of this kind of grass-land set apart for hay was more by 95,000 acres in 1871 than in 1870. There would thus be, at an average yield of one ton per acre, an increase in 1871 over 1870 of nearly 100,000 tons of clover and artificial grass-hay, representing, at an average price of £4 per ton, the sum of £400,000. There is a great difference shown by the returns in the proportion of grass under rotation in England and in Scotland, which is reserved for hay. In 1871 the proportion in England was nearly 60 per cent., against 26 per cent. in Scotland.

For permanent pasture, the returns of 1871 show a considerable increase in the total average, to the extent of 362,000 acres. Of this additional acreage, 201,000 acres were returned in England, the chief increase being in the counties of Cumberland, Devon, and the three Ridings of

York; 67,000 acres in Wales, principally in the counties of Cardigan, Carmarthen, and Denbigh; and 94,000 acres in Scotland, with the increase chiefly marked in the counties of Ayr, Perth, and Kenfrew. The larger return of permanent pasture in 1871 was due partly to the entry under that heading of land previously but erroneously classed as grass under rotation, and partly to describing as pasture, additional quantities of down or hilly grass land.

With respect to the proportion of permanent pasture returned as "for hay" in 1871, a large increase will be expected from the known deficiency of hay of the growth of the previous year. In Great Britain, 422,000 more acres of permanent pasture were kept for hay in 1871 than in 1870. This additional acreage, at an average yield of 18 cwt. per acre, would make the meadow-hay crop of Great Britain in 1871 greater by 380,000 tons than the crop of 1870 at the same average yield. The actual difference between the crops of hay in 1870 and 1871 was probably, under the influence of the seasons, larger than this estimated amount of increase in 1871. But it may be of some interest to notice how much the acreage for a crop following upon a bad season was extended. The value of the estimated yield from the additional acreage of meadow-hay in 1871 would, at £3 per ton, amount to as much as £1,140,000. This sum, added to the estimated value of the extra growth of clover and artificial grass-hay in 1871, would show that provision was made by the farmers of Great Britain for a larger growth of hay of all kinds in 1871 over 1870 of the estimated worth of £1,540,000.

A comparison of the returns of live stock in 1871 against 1870 exhibits some variations in the number of animals kept by occupiers of land, more especially as regards sheep. With respect to horses there was a slight decrease of 12,000 in the total number returned as used for agricultural purposes in Great Britain in 1871. The number of licences issued for horses subject to duty was 856,149 in 1871 against 841,208 in 1870. The total stock of horses in the United Kingdom in 1871 has already been stated as amounting to 2,648,000. But allowing for more than one licence for some horses, upon change of ownership, the total number of horses may be taken at 2,600,000 in round numbers. This is a large number in proportion to the area as compared with some foreign countries. It exceeds the number of horses in Prussia and France. Horses are the most costly kind of live stock to maintain, and it is probable that, taking one class of horses with another, the general annual cost of horses of an age for work in this country is not far short of their actual value.

The total number of cattle returned in Great Britain in 1871, shows a decrease of 65,000 as compared with 1870. Taking cows and heifers only, the decrease was 70,000, but the number of other cattle was slightly increased. In Ireland the stock of cattle, which is considerable, was larger in 1871 than in 1870 by 177,000 head. Of the total number of cattle in Great Britain in 1871, 39 per cent. comprised cows and heifers in milk or in calf, 26 per cent. other cattle of two years of age and above, and 35 per cent. other cattle under two years of age.

The stock of sheep is more affected by the character of the seasons than the stock of cattle. Owing to repeated drought, and the consequent shortness of green food, the number of sheep in Great Britain decreased in each of the years 1869, 1870, and 1871. The total number in 1871 was smaller than in 1870 by 1,278,000, smaller than in 1869 by 2,449,000, and smaller than in 1868 by 3,592,000, or nearly 12 per cent. In Ireland the number of sheep in 1871 was smaller by 105,000 than in 1870, and smaller by 672,775 than in 1868.

Under more favourable conditions as regards the supply and cost of food, the stock of pigs in Great Britain, so far as returned, shows an increase of 328,000 in 1871 over 1870. And in Ireland there were 157,000 more pigs in 1871 than in 1870.

A comparative table of the chief results of the agricultural returns as separately exhibited in the grazing and corn districts of England is given as in previous years. It may be desirable to repeat the names of the counties included in each district or division.

The Grazing or Western Division includes the counties of Northumberland, Cumberland, Durham, Westmoreland, York (North and West Ridings), Lancaster, Chester, Derby, Staf-

ford, Leicester, Salop, Worcester, Hereford, Monmouth, Gloucester, Wilts, Dorset, Somerset, Devon, and Cornwall.

The Corn or Eastern Division, includes the counties of York (East Riding), Lincoln, Nottingham, Rutland, Huntingdon, Warwick, Northampton, Cambridge, Norfolk, Suffolk, Bedford, Bucks, Oxford, Berks, Hants, Hertford, Essex, Middlesex, Surrey, Kent, and Sussex.

The total acreage as returned for the counties named in each of the three divisions does not materially differ, but the acreages and per-centage proportions for the several kinds of crops show in many instances marked signs of difference in the course of cultivation followed in the grazing as compared with the corn districts in England. It may perhaps be of some interest to point out that, whilst the acreage under corn is in ex-

cess in the corn districts by 1,628,000 acres, the acreage under green crops (except potatoes) and grass under rotation is only larger in the corn districts by 206,000 acres. The return of the acreage of orchards shows that the proportion of land used also for fruit trees is considerably higher in the grazing or grass division than in the corn division. A comparison of the number of sheep in the two divisions as given this year and in last year's returns, shows a larger proportionate falling off in the stock of sheep in 1871 in the corn than in the grazing division. In the former (comparing 1871 with 1870) the decrease was at the rate of about 8·5 per cent, and in the latter at the rate of 6·5 per cent.

W. A. FONBLANQUE.

Statistical Department, Board of Trade, February, 1872.

THE FARMERS' CLUB.

THE TRANSIT OF LIVE STOCK.

At the monthly meeting on Monday evening, March 4, Mr. H. Cheffins in the Chair, the subject stood in the name of Mr. A. Welch, of Southall.

After a few prefatory remarks from the Chairman,

Mr. WELCH introduced the subject as follows :

The subject we have to consider this evening is the transit of live stock. It is a subject of great importance, and one in which not only the members of this Club, representatives of the farming interest, but also the public generally, have taken a deep interest, and it still receives its share of the interest attaching to other problems which it is desirable to have solved. The Highland and Agricultural Society of Scotland are pressing the Executive for increased accommodation for the watering of cattle. In the *Farmers' Magazine* for January, 1872, I read the following under the head "Highland and Agricultural Society of Scotland: "The report by the Committee on the Transit of Animals by Railway was submitted. It embodies the whole proceedings of the Society from the time the subject was first taken up by the directors in 1867, and proceeds as follows: 'After carefully considering the documents submitted, and the Act to which the Order of Council has reference, the committee beg to recommend that the board should again communicate with the Lords of the Privy Council, through Dr. Alexander Williams, specially pointing out—I. That the Order of Council (300) called "The Transit of Animals Order of May, 1870," for providing trucks with spring buffers and supplying water to animals carried by railway, is not only systematically evaded, but is defective in respect that provision is not made for supplying animals with food; and that a new Order of Council is urgently called for. In the new Order it should be specially provided—(1) That animals should be supplied with water when trucked and untrucked; and during the journey both with food and water. The necessary food to be provided by the owner of the animals, the water by the railway company. The Act says that if animals are allowed to be in trucks without water for a period between twelve and thirty hours (to be fixed by the Privy Council), the railway company will be guilty of an offence. A rule of the same kind should be adopted for food against the owners. (2) That in addition to the spring buffers stated in the Order of Council (300), it is absolutely necessary to provide covered waggons, closed at the ends, and 18 inches along the sides from each end, with an arrangement of troughs for the proper supply of the animals with water, and racks for supplying hay in the trucks during

the journey. II. That many important railway stations where animals are trucked and untrucked are not included in the schedule attached to the Order of Council (324) called "The Transit of Animal (Water) Order of March, 1871." (Here follow the list of additional stations suggested; but the committee consider that should the Privy Council issue an order that water be supplied in the trucks, it will not be necessary to have it at all the stations enumerated.) The committee further suggest that should the Privy Council not give effect to the representations proposed to be made to them, an influential deputation should be formed to wait on their Lordships.' The report was approved of by the directors." The February number of the same magazine contains the following reply of the Privy Council:—"Princes-street, Westminster, 21st December, 1871. Sir,—I have submitted to the Lords of the Council your letter of the 8th instant, transmitting except from the minutes of a special committee of the Highland and Agricultural Society of Scotland on the transit of animals. Referring to the minutes above alluded to, I am directed to state that any specific case of evasion of the provisions of the Transit of Animals Order of May 1870, if reported to this office, will receive the attention of the Privy Council. With reference to the first provision proposed by the committee, I have to inform you that no means which the Privy Council would feel justified in enforcing have been suggested to their Lordships for the supply of water to animals during transit. On this point I beg to draw your attention to the enclosed copy of the report of the Transit of Animals Committee. I am directed to state that the suggestion of the committee as regards covered waggons, and as regards food being provided, shall be taken into consideration by their Lordships. I have the honour to inform you that of the 44 stations suggested by your Society to be included in the schedule to the Transit of Animals (Water) Order of March 1871, it is already proposed to include 25 in the next order of Council relating thereto. Of the remaining 19, at 13 stations the traffic is so small as not to call for the expenditure necessary to supply them with water. We are in communication with the authorities of three on the subject of water supply; and it has been reported to this office that the supply of water to the remaining three would involve a very large outlay. I have the honour to be, sir, your obedient servant, ALEXANDER WILLIAMS, Sec. To the Secretary of the Highland and Agricultural Society of Scotland." I

may add that a veterinary congress is now assembled at Vienna to take into consideration the whole subject of the transit of live stock. For my part I think it a proposition which cannot be controverted, that great advantages would be afforded to stock owners and to the community generally by adopting an improved and a more humane system for the transit of our neat stock, our horses, and our sheep. Indeed, a marked improvement in the condition of our stock brought to market has already resulted from public opinion pressing upon the Legislature and the Executive Government better regulations for the transit of animals by land and by sea; and improvements may certainly be carried further. Before I proceed to enter at length upon the subject, I hope you will permit me to explain to you the occasion of my bringing it before the meeting; because, as a comparatively newly-elected member it might appear presumptuous in me to come forward and take the leading part in this evening's discussion, especially when there are many older members of the Club of such great experience, and possessing such a thoroughly practical knowledge of our subject—gentlemen who justly have the ear of the Club, and are much better qualified than I am to lay the whole matter before you. The occasion was this: I wrote a letter, which, I trust, you will permit me, as an introduction to my subject, now to read to you: "To Henry Corbet, Esq., Secretary, Farmers' Club. Sir,—In reply to your circular, inviting suggestion of subjects for discussion at the monthly meetings of the committee of the Farmers' Club, I would suggest the subject of the transit of cattle, horses, and sheep by railway, as one especially requiring their attentive consideration. There are really no reasons of any weight why our domesticated animals should be subject to the hard and cruel treatment they endure on their journeys by railway, thereby entailing the heavy loss on the stockowner from the damage to animals, received from the rough and careless conduct of the traffic. The consideration of the subject by the eminent practical agriculturists composing your committee would elicit the proper measures to apply a remedy, and probably institute a better conduct of the traffic. A few days ago, at a meeting of the Central Chamber of Agriculture, Mr. C. S. Read, M.P., instanced two cases of the hard treatment of cattle travelling by railway—one where cattle sent from Norfolk into Kent were detained without food or water in the cattle-tracks from six o'clock a.m. on Monday until four p.m. the following Wednesday. Another, in which some cattle from Aberdeen, were detained from Monday until the Thursday following. Such cases constantly occur; indeed, it is exaggerating but little to say, that animals travelling by railways have been dealt with much as wood or stone, and not as animated beings which should have refreshment supplied to them on their journeys according to their organisation; but which the present railway system does not permit however desirous the owner of such animals might be to supply it. Some steps have of late been taken in the proper direction in this matter, but stockowners themselves are the proper persons to impress the improvements which are urgently needed. I am, sir, yours very obediently, A. W." When I wrote that letter in reply to the circular of the committee of the Club, I was not aware that it was a rule that those who suggested should undertake the responsibility of laying their subject before the meeting. In treating of the transit of live stock and subjects pertaining to it, I shall not forget that I am addressing practical men who are well acquainted with them, and I shall not pile up a mass of

figures to show the magnitude of the traffic. I will merely mention that 60,000 head of cattle were landed at the Norwich station of the Great Eastern Railway alone, during the last autumn months. Traffic quite as extensive is going on at numerous stations over the length and breadth of the land. I have long taken a great interest in, and I have been at considerable pains in endeavouring to improve, the means for the conveyance of our cattle; and the present seemed to me a favourable time for a fresh survey of the whole subject of transit of live stock—a time to reckon up how much improvements had been made in respect of it, and to see to what extent the needs of the cattle as regards their being supplied with food and water and shelter and other comforts had been provided for. I remember, when fat cattle were driven up by the road, it was estimated that in a journey of 100 miles, bullocks would lose each 10 stones, and sheep 1 stone. The consignors of cattle from Scotland to the London market now estimate the loss in weight of the cattle from the journey at from 4 to 6 stones each. A gentleman of great experience and practical knowledge, who gave his evidence before the committee appointed by the Lord President of the Privy Council to investigate this subject of transit, gives it as his opinion that cattle would, under conditions which he details, lose 8 pounds per day per head from the day they leave the graziers' yard. The following is from the minutes of evidence published with the Report of the Committee of Privy Council, p. 15, No. 316: "It is my firm opinion that every bullock from the moment it leaves its grazier's yard, will lose 8 pounds a-day in weight, besides loose fat. It is beyond all description—the loss. Very few people understand it; it has been a constant cause of contention between the farmers in the country and the butchers in London." This has reference to cattle under the ordinary conditions of transit—in respect of cattle which we may presume are better cared for than other cattle, and which may fairly be supposed to receive the utmost attention that can be given to their needs. I have taken the weights of the same beasts weighed for the last Birmingham Show and weighed afterwards for the Smithfield Club Cattle Show, and the 40 beasts show a total gain of 10 stones 11bs. Now I would put it to the meeting—is not the proper transit of cattle a matter of national thrift in the department of agriculture which our Royal Society, and the other grand societies which have reached almost equal importance, would do well to investigate? The Report of the Committee of Council recommends to the Privy Council "That further experiments should be made to ascertain which, or what combination of which, of the modes proposed of feeding and watering it would be most advantageous to adopt; and then that it should be imperative upon all carriers of animals, when the distance traversed is 200 miles or upwards, to provide food and water for the animals so carried, and to see that such food and water is offered to the animals." Could not these societies make arrangements for the weighing of animals at their starting from their homes for the various shows, and for the weighing of them when received into the show yard, taking into account also the food and water the beasts have consumed during the journeys? Is there any reason why they should not offer prizes for the best adapted cattle-trucks—trucks which would carry cattle in the most advantageous manner for the profit of stock owners and the consumers of meat? Are not such vehicles as machines devoted to the carriage of agricultural produce of as much importance as carts and waggons

for the conveyance of corn and other produce to market, and as much or more worthy of attracting mechanical ingenuity and practical knowledge in relation to the functions, habits, and requirements of cattle, so as to get them built in the most appropriate manner? The London Farmers' Club, composed as it is of men eminent in every department of agriculture, is an institution which should give an opinion on these matters with great weight and authority. I look upon this Club as especially the eye to see to the farming interest, and the brain to devise measures for its complete development. The action taken by our Club in the transit of live stock has done much to guide public opinion upon it, and to advance sound views as respects the Government regulations; and I think it will not be uninteresting, or a waste of time, if I briefly refer to former proceedings of the Club on this subject. So long ago as February, 1863, the question was most ably brought before you by the member for South Norfolk: you will find the account at page 5 of the *Journal*: "At Norwich station I have frequently seen cattle at nine or ten on Saturday morning, and they remain there until two, three, and four o'clock in the afternoon. (A voice: 'Six o'clock!') Well, I have seen them at four. Notwithstanding the immense import of stock into Norwich, there is not a single drop of water at that station for cattle. It is said that there is a river within 300 yards of the station. Why, in like manner it may be said that there are plenty of bakers' shops at the east-end of London, but the people do not all get as much bread as they want. I trust that now that the chairman of the Eastern Counties' Railway is a nobleman of great ability and a man of business, that defect at all events will be remedied. At present the cattle remain without food or water till Sunday morning, and at ten or eleven o'clock they are placed in the lairs, of course in a fit condition for contracting any disease. The distance from Aberdeen to London is 550 miles. Mr. Tegg, the inspector of cattle at the Metropolitan Market, stated in '64 that cattle conveyed by the railway companies from Scotland leave there on Thursday, and do not get to the lairs of the Metropolitan Cattle Market until Saturday, and he has every reason to believe that they have neither food nor water during the transit; and if there were any predisposing causes of disease this cruel treatment may well induce its appearance. Of course there is here more harm to the consumer than to the buyer. The animals are killed too soon to produce actual disease, but the meat must be less wholesome. Consumers in London talk a great deal about the bad quality of the meat which is grazed, and the amount of oilcake and other artificial foods used in fattening animals; but I believe that what I have mentioned has more to do with the defects in question than anything else. Now, in the case of store-stock transit, all these miseries are, of course, augmented. Store stock cannot stand heat, cold, and fasting so well as old fat cattle." You have thus a statement of the condition of transit, at that time. Looking "on that picture and on this"—I mean the state of things under Act of 1869, and that under the Orders of May, 1870, and December, 1871—looking at the cleansed and disinfected cattle trucks, some of them roofed over, and all constructed with spring buffers, and the water troughs, such as they are at many stations, we wonder how it could possibly have happened, under our popular constitution, with free liberty of speech and a parliament full of Farmers' Friends, that such obvious and simple contrivances for the barest requirements of the cattle traffic could have so long been neglected. And "still the wonder grows" that the very obvious regulations recommended in the Report of the Committee appointed

by the Privy Council have not yet been enforced. The fact is, as one of the Ministers has lately avowed, it is for the Government rather to follow than to lead public opinion. They must watch the division list, weigh the probable result of elections, and calculate the relative force of special powerful trading interests in the House; and, unless they can assure themselves of a powerful public opinion to outweigh such influences as these, they dare not act. The divinely-gifted man, to whose far-seeing genius all shall submit, has not yet grasped the helm of the State. Until he does, we must take the sagacious advice of the member for South Norfolk, and press. As he said, "Nothing can be done in these days without pressure." I think you will be of opinion that the powers given to the Privy Council, under the Act of 1869 (The Contagious Diseases Animals Act of 1869 enacts:), have not been enforced to the extent that they might be. We are so conservative in this old England that only a great catastrophe, a national calamity, can move us out of the beaten track of an old procedure, and the fearful visitation of the cattle-plague, by arresting public attention and turning it to consider the means of a better transit for our cattle, indeed the Government to bring forward measures resulting in the Act of 1869—the cattle's Magna Charta. With respect to the watering of cattle during transit, what was your (the Farmer's Club) recommendation in the letter you sent to the Privy Council? It was that cattle should be watered every twelve hours. Let me read what you recommended in full: "At a special meeting of the Committee held at the Club House, Salisbury Square, on Monday, October 4th, Mr. R. J. Newton in the chair, the circular letter from the Privy Council Office on the transit of animals came under consideration, when the following answer was agreed to—The Committee of the Club would in the outset impress the great importance of the more speedy transit and delivery of animals carried by railway, while it would further recommend that all trucks for the conveyance of animals upon railways should be fitted with spring buffers. That, in order to prevent the injurious effects upon the animals by the shunting of the trains and from other causes, the trucks should be divisible into compartments. That it is undesirable to unload animals during transit by railway. That animals should not be upon a railway for more than twelve hours without water; and that railway companies should be compelled to provide means for the proper watering of cattle before loading. That any appliances for the watering of animals should be attached either to the carriages, or troughs should be so placed at the stations that animals travelling for more than twelve consecutive hours can drink from such troughs without being removed from the trucks. With respect to the feeding of cattle, the Committee is of opinion that there are great difficulties in the adoption of any plan, and is not sure that the feeding is necessary or desirable. That all vessels for the conveyance of cattle should be licensed for the purpose; and that the number of animals such vessels should be laden with be defined, on the same principle as is adopted with emigrant ships. That the vessels should be divided or divisible into compartments in the same way the Committee has recommended for railway trucks. That pleuropneumonia and other diseases are no doubt engendered by the exposure to which animals are subjected on landing, and that sheltered accommodation should be provided on their disembarking." The Central Chamber of Agriculture recommended twelve hours; the Cheshire Chamber twelve hours; the Cornwall Chamber twelve hours in winter and ten hours in summer; the North Riding of Yorkshire Chamber twelve hours; Scottish Chamber twelve hours and the same period afterwards (There is a demurrer to this from Mr. Wm. McCombie,

M.P., at page 77 of the Appendix to the Report of the Privy Council Committee); the West Riding of Yorkshire also recommended twelve hours; the Worcestershire Chamber twelve; the Midland Club twelve; the Penrith Club six or eight; Mr. Wm. Torr eight hours; and Professor Hugh Ferguson twice a day. The Privy Council have not fixed less than thirty hours for first watering, as opposed to the remarkable unanimity of the foregoing opinions. I must not omit to allude to those of a body of gentlemen composing the Royal Northern Agricultural Society, and endorsed by the Chairman, the member for Aberdeenshire, Mr. McCombie, for whom we must feel the highest respect, and to whose opinion and those of his colleagues we would willingly show great deference. But the member for West Aberdeenshire is here, and will speak for himself. I would always well weigh the advice of observant practical men; but when there is a conflict of opinion among them, it is well to consider the opinion of men of science. What says Professor Simonds upon the point? "There cannot be a doubt that the feeding and watering of animals on their journey to a fat cattle market would prevent, to a certain extent, that waste of tissue which invariably takes place in the travelling of cattle, and would also tend to maintain that 'juicy' and well known superior quality of the meat which is met with in animals when killed at home. From a humane point of view, also, it is exceedingly desirable that animals should have both food and water on long journeys, the latter being especially required during the heat of summer." Now, I think I can refer to the opinion of a practical man fully corroborative of the Professor's observations as to waste of tissue. He says, in reference to cattle killed from off long journeys: "There is occasionally a want of *that freshness* that we see in the beasts that come a shorter distance." On railway transit the Privy Council have made no Order for animals to be *fed*, except on the requirement of the owner, under the Act of 1869, section 64. As to food, you, the Farmers' Club, were not sure food was desirable. Science is against you. I would remark that to keep your cattle thrifty you feed them three times in twelve hours during the day, and you fill the racks well at night that they may not want before morning; you then send them away for a 30 or it may be a 40 hours' journey without food. And I would again refer you to the comparison of weights of the beasts exhibited at the Birmingham and London shows, as proving how care and food will sustain cattle in travelling. You recommended a more speedy transit. There is a perfect unanimity upon the advantage of this to the cattle. Mr. William Torr says: "The great objection now is to trucks with east-iron wheels going on with passenger trains; if the wheels of the cattle trucks were made with wrought-iron, the same as passenger trains, they would pass along with passenger trains, and I think it is very short-sighted economy in railways, where there are not many cattle-trucks, not having them on wrought-iron." The Committee appointed by the Privy Council say in their report: "Having east-iron wheels instead of wrought-iron, they are not, as a rule, permitted to be sent by passenger, *i.e.*, by the fastest trains." As to spring buffers, they are now universally provided. There is great agreement not to have cattle unloaded during the journey. But unless the hay and the water are carried in the truck with the beasts, or there are proper sidings and earriages adapted to the sidings, how are the animals to be refreshed? Such provision is not yet made, nor is it ordered. We now arrive at an important recommendation for our consideration; it is the dividing trucks into compartments. I think there can be no question as to the great advantage of this for fat cattle. But I do not find in the report of the Privy Council Committee that that subject was at all entertained by them, notwithstanding that the matter was urged on the committee by the Cheshire Chamber, the Devon Chamber, the Midland Chamber, the Penrith Club, the Farmers' Club, and others. Much deterioration would be prevented from bruises by this means. It would allow of the sorting of cattle and would give them a better opportunity to lie down and rest on the journey. None of the carriages are so constructed, nor is there any order to enforce it, although there is great testimony to the advantages that must accrue. In my own letter of recommendation to the committee I have advised the supplying of more elastic springs to the cattle trucks, which I consider a point of great importance. I there say: "A quicker transit, more elastic buffers, and springs, preventing the constant wearying tremor through the frames of the cattle, would contribute much to their ease." Possibly it

may have been the fate once in the lives of some present—if not I should recommend them to try it—to ride at a trot in a cart without springs, or with springs constructed for a ton weight. In such a position you are able to realise the dreadful position of the poor cattle standing on ribbed floors, hurried along at 15 or 20 miles an hour in carriages with springs stiff enough to carry treble their weight. This is the cause of the break-down of many a young ox, and I would venture to ask members of the veterinary or medical profession what must be the effect on the nervous system of this violent shaking. On this point the Privy Council committee say in their report: "The jolting and severe shaking now often experienced by the animals, by which it appears in the evidence that much pain and damage is often inflicted." The following are, I have ascertained, the dimensions of some of the springs of railway carriages: First and second-class passenger carriages, length 6 feet, 12 leaves each, $\frac{3}{8}$ ths of an inch thick, width 3 inches; truck registered to carry 8 tons, length 3 feet 6 inches, 12 leaves each, $\frac{3}{8}$ ths of an inch thick, width 3 inches; truck registered to carry 9 tons, length 3 feet 6 inches, 10 leaves each, $\frac{3}{8}$ ths of an inch thick, width 4 inches; cattle truck, length 3 feet 6 inches, 12 leaves, $\frac{3}{8}$ ths of an inch thick, width 3 inches. Average weight of stalled cattle alive say 140 stones of Slbs., or half a ton each. Thus the trucks for cattle, which are never weighted with a load of more than four tons, have springs equal to the carriage of 8 or 10 tons. A supply of saw-dust or tanner's bark kept at the stations to strew over the floors of the cattle truck would conduce very much to the comfort of the cattle, and help them through long journeys in standing up and also in lying down. Ribbed floors are very necessary for foothold, but without saw-dust they are extremely wearying and painful for the beasts to stand upon. Tar-paulins and other conveniences are supplied for merchandise. Is there any reason why the necessary conveniences should not be supplied for cattle as well? At present the provender for cattle is protected better than the cattle themselves. In the transit of animals by sea the difficulties are greater than by land, because we have to contend with a power compared with which all our efforts must be feebleness itself. With a fair wind and a moderate sea, cattle come to land better by the well-ventilated and properly-fitted ship than they do by railway. The Privy Council have a difficulty in dealing with vessels, because some are not under the British flag, and carry cattle as occasional cargo only. On a full consideration of the subject in all its bearings, I think we are fully warranted in requesting the Privy Council to put in action the power with which sections 64 and 75 of the Contagious Diseases (Animals) Act of 1869 has invested them, the immediate object being that every cattle-truck should be roofed over to protect cattle from the sun, as well as from the rain and snow; that the trucks should be surveyed and branded, to denote their fitness of construction; that they should be run on wrought wheels, and furnished with springs suited to the weight they have to carry, and that they should be partitioned transversely across the centre; also, that a supply of sawdust, or tanners' bark, should be kept at all stations for strewing the floors of the cattle-trucks, and that the water-troughs at the stations should be made of suitable dimensions for the traffic. I think it is very desirable also that we should endeavour to persuade our great agricultural societies to undertake experiments in weighing cattle sent by rail, and to grant prizes for trucks best adapted for the traffic. In placing this important subject—imperfectly, as I am aware—before you, I have not given you an hypothesis merely, I have given you facts. You have my reasons for all I have advanced, substantiated by recognised authority; and, in the main, I have dealt with the question, and laid it before you this evening, in its commercial bearings only. But there is another aspect of it elisting the public sympathies in which it must also be viewed. Not in this room, and, I trust, in no other assemblage of British farmers, will considerations of humanity be set aside or disregarded. We cannot ignore the sympathies of a common origin. The mere materialist, in his researches in physical science, perceives this, and, in the words of an eloquent professor, we are all children of the sun. In our own construction and the construction of lower animal life there is a similarity of combination; but more—there is a mystery involved also. The lower animals are placed under our dominion, and we incorporate and assimilate their constituents in our own. All things are given to man, but with the requirement of a

thoughtful disposition of them according to the enlightenment of our knowledge.

Mr. M'COMBIE, M.P., said: The transit of live stock is a subject that deeply affects the interests of the farmers of the North of Scotland; and without further preface, and with your leave, sir, I will at once proceed to make a few observations on this important matter (Hear, hear). We have an express cattle-train every Thursday from Aberdeen to London. The Railway Company profess to run the train in 36 hours; but the time taken on the journey is often extended to 40 and 42 hours, and is sometimes longer. The distance from Aberdeen to London is about 520 miles. I live 30 miles west from Aberdeen, and I am therefore 550 miles from London. I have cattle in the London market weekly from the middle of October to the middle of April. Along with the graziers and the jobbers in the North of Scotland I am deeply interested in the transit of live stock, which is in a very unsatisfactory position. As an example, I may state that the other day I forwarded a truck of breeding cattle to Mr. Read, the member for Norfolk, from Aberdeenshire. I booked them to Norfolk. Some were heavy in calf. They were three days and eight hours on the road, and more than three days without food or water (Hear, hear). I sent in the previous week a truck of breeding cattle to Norfolk, and they were exactly the same length of time on transit. I give these cases merely as specimens of how we are treated by the railway companies. There are complaints every day, but it is of no use to expostulate with them (Hear, hear). They tell you that they are very sorry for the unavoidable delay, and are most obliging in other respects, but give no relief by the curtailment of time. They will do nothing unless they are compelled (Hear, hear). The passenger trains run the distance from Aberdeen to London in sixteen and a-half hours. The express cattle train might run it in thirty hours; and I think this would meet the views of the senders generally. The deterioration in weight of the cattle sent by railway to London must be great, and a heavy loss to the senders and consumers, owing to the long time the animals are on transit. I train my cattle for their long journey. I send them out, a week before they start, to a field. They are there walked slowly for three or four hours, and this is repeated every alternate day before they start. By this method the cattle are fairly set on their legs, and I have never lost a beast by rail. The jobber buys at the fair a lot of cattle that have travelled the same morning ten or fifteen miles to the market, and have seen neither sun nor moon for perhaps six or eight months. They are immediately consigned from the market to the railway truck. Leg-wearied, down they go, and, being unable to rise, they are trampled to death. Many a valuable animal is lost in this way, from the want of training, but this is no fault of the railway companies (Hear, hear). Now, sir, what we want is the curtailment of the time on transit. Every bullock from Aberdeen costs before he is sold from £1 1s. to £2 a-head. We do not complain of this; only let the time be shortened, that we may suffer less loss from deterioration, and in the cause of humanity. But how is this to be rectified? Some say by Act of Parliament; others say, "Stand by the Law, and give the cattle food and water every thirty hours;" others say, "Let us have Mr. Welch and Reid's trucks." It is very easy to say pass an Act of Parliament, but it is not so easy to accomplish it (Hear, hear). The Railway interest in the House of Commons is very strong. I found it too strong for me when I attempted to make an alteration two years ago. The tenant farmers' interests have never been represented in the House of Commons (Hear, hear). The county and the borough members have it all their own way, and we shall never be properly represented till we send gentlemen of our own class to speak for us (cheers). It may be that in some counties a tenant-farmer cannot be found to undertake the responsibility. We must then send to Parliament a proprietor in whom we can place implicit confidence, and who will go heart and soul in favour of the interest of the British farmer. We must not accept any "uncertain sound;" we must have a solemn pledge that he will support us in all the measures that affect our interest (Hear, hear). And these measures must be clearly and separately brought before him for his acceptance; for it is wonderful how some men, and how soon they try to wriggle out of their engagements (laughter). We must hold them fast. We have the matter in our own hands.

We now feel our power and will exercise it (Hear, hear). I recollect a time when our Aberdeenshire member gave no pledge except that he would vote for the abolition of the Malt-tax. No questions were asked; but he had a lord for his brother, and the dukes and lairds and lords at his back, and the tenant-farmers were nowhere (Hear, hear). We will not be led away by the cry either of Whig or of Tory (Hear, hear). The question with us will be who is the candidate that will best support our interests; and that is the man we will support. Although an independent supporter of the Government sitting below the gangway, I am displeased with the conduct of the Chancellor of the Exchequer (laughter). He has saddled us with the Gun-tax, with a duty on shepherds' dogs, a tax on the farm-carts that take the old and infirm to church; and a farmer cannot exchange a horse during his lifetime without having to pay the horse-dealers' licence of £12 12s. The right hon. gentleman will take no advice. He is far above that (laughter). He was obliged to hear the matchmakers (laughter), and I trust the day is not far distant when he will be obliged to hear us (Hear, hear). The Government should shake themselves clear of him if they are wise men (laughter). He has done them a great deal of harm. The law says you must water cattle if longer than 30 hours on transit. Our Aberdeen cattle are more than 30 hours on transit. Some of my friends in Scotland advocate the feeding and watering of cattle on transit. It may be very well for those who are living around Edinburgh, who send few cattle to London, and who, if they do send any, can send them within 30 hours, but they have not considered the position of their northern friends, and I think I shall be able to prove to you this evening that it is impractical and impossible to water and feed cattle between Aberdeen and London with the present method of carrying cattle by rail. Some who are ignorant of the subject will say, you can easily loose the cattle from the trucks into a field, give them food and water, and re-truck them again. We shall see whether this can be done without a much greater case of inhumanity than allowing them to proceed on their journey in the ordinary way. An express train of say 25 trucks leaves Aberdeen, for example. I have two or three trucks filled with fat bullocks; I have got the trucks covered; I have put saw-dust below the feet of the cattle; the cattle have been in one yard and trained together; they can lie down when inclined (I never over-crowd the trucks), and are able to rise when so disposed. Several of my neighbours have cattle similarly situated in the train. Then we have a truck or two of valuable breeding cows, heavy in-calf, and a truck or two of valuable one and two-year-old heifers not served with the bull. But in the train we have belonging to another sender or owner a different sex. We have a truck or two entirely composed of bulls, which are loose like our bullocks. Another sender has two bulls and four bullocks or heifers. The two bulls are secured by strong ropes attached to the ring in the nose of the bull, and the ropes are firmly tied to the framing in the two separate ends of the truck. The bullocks are quite safe in the middle between them. It may be that there is but one bull, and five bullocks, cows, or heifers. This is an every day occurrence. In the above manner the express cattle-train starts for London. If the present law is carried out what must be the unavoidable consequences? After the 30 hours have expired the whole cattle in the express cattle-train are set at liberty for the purpose of being fed and watered—bulls, bullocks, cows in-calf, and heifers not in-calf (laughter). The railway servants may unloose the bulls, but how are they to tie them up again? (Hear, hear.) When at liberty the bulls will draw to the cows and heifers; and some of the heifers may be in heat at the time, and the scene baffles description. It is an impossibility but that some of the cows that are heavy in calf, and the heifers in heat, if they are not killed on the spot must be irretrievably injured (Hear, hear.) But the last picture of the drama has still to be performed. The 150 cattle have to be re-trucked. It is well known to all persons acquainted with the cattle traffic, that cattle that have once been trucked are very difficult to re-truck, and it is often only by force that it can be effected. Even if it were possible for the railway servants to put the beasts into their own trucks again, they could never attempt it on account of the time it would occupy to draw the lots by their different marks. Breeding cattle generally have no marks; the number of the truck only designates them—so many beasts from A. B.

to C. D. This is a barrier that cannot be got over. We cannot expect the railway servants to have the same ability to draw cattle as the London or Dumfries drovers. Since droving by land was superseded by steam in Aberdeenshire, we have not had a man who can draw cattle properly. The old cattle drovers have almost to a man gone to their rest. There are no drovers equal to those belonging to Dumfries. Those men do the cattle justice, and it is delightful to see how they perform their work. The London drover is very severe on the cattle. If I have proved that the drawing of the cattle and the replacing them as formerly in the trucks are impossible—what must be the inevitable consequences? The cattle must be returned indiscriminately to the trucks—bulls, cows, heifers, and bullocks being mixed, just as is most convenient to the railway servants (Hear, hear). Can the bulls that were secured to the corners of the trucks be put in their places again? Where are the loose bulls now to stand? Why, indiscriminately, with bullocks, cows heavy in calf, heifers in heat, &c. The heifers in heat cannot be separated from the stronger bulls, some of the weaker bulls will take side with the cows (laughter), and there will be frequent deaths before the cattle reach their destination. How many breeding animals will receive injury from which they will never recover? A word as to the fat stock. There must be great waste and deterioration in their condition, and some will go down, owing to their bad treatment, to the loss of their owners and to the loss of the consumers. You are aware that some bulls are so vicious that even their keepers can hardly govern them (Hear, hear). I sent one myself last year to the fat market here that required six or eight London drovers to convey him from the station to the slaughter-house (laughter). The ring was torn from his nose, and the drovers were in great danger; he could not be taken to market, and was sold in the lair and slaughtered there. What could railway servants do in such a case as that? and they are carrying such animals every day (Hear, hear). Now, sir, these statements are neither coloured nor overdrawn. I do not mean to say that every express cattle train is made up in the way I have mentioned, but it will occasionally be so, though perhaps in different proportions. I should consider it a high honour, and it would afford me gratification if I have thus satisfied you, sir, and the Club that it is impracticable and impossible to remove cattle on transit from their trucks to be fed and watered under the present mode of transit, and with the present formation of our cattle trucks. Let it not, however, be supposed for one moment that I am against the watering and even feeding of cattle on transit (Hear, hear). In the cause of humanity I am most anxious to see steps adopted by our railway companies to curtail the time of transit and make adequate provision for cattle being watered and fed on their journey. But, if cattle are to be watered and fed, the trucks must be constructed on a different system (Hear, hear). I am well acquainted with the merits of Mr. Welch's truck, which might obviate the difficulty if the railway companies would adopt it. At my request Lord Forster allowed the model of that truck to be exhibited in the House of Commons for fourteen days. It attracted great attention and commendation, and met with the approval of Mr. Forster and the members generally. It was also exhibited in August last at the Highland and Agricultural Show at Perth, where it likewise attracted attention and won the first-class medal. But Mr. Reid has also a rival truck, and since I came into this room I have heard of another, which I hear he has greatly improved. I was favourable to Mr. Welch's truck as opposed to Mr. Reid's, but have not examined Mr. Reid's improvements. To do justice to both parties, might I take the liberty of suggesting that a committee be appointed from this Club, from the Highland Society, and from the Royal Northern Agricultural Society, which represents the great beef-producing counties of Aberdeen, Banff, Moray, and Kincardine; that they examine the merits of the two trucks; and that they draw up a report thereon, and submit it to Mr. Forster, with the view of having it adopted by the railway companies (Hear, hear)? I beg to tender you my best thanks for the patience with which you have listened to my remarks, and I shall be glad to give any explanations that may be desired as to anything that I have stated (cheers).

Mr. G. SMYTHIES (Marlow, Leintwardine) said he should be glad to learn from Mr. McCombie how long the dead-meat trains took to come from Aberdeen to London.

Mr. McCOMBIE said the railway companies professed to convey cattle in thirty-six hours, but he believed they never arrived under forty or forty-two hours, and sometimes it was longer.

Mr. SMYTHIES said he fancied that the dead-meat train came just in advance of the mail train.

Mr. McCOMBIE added that not being interested in the dead-meat trade he could not give any more precise information.

Mr. C. S. READ, M.P., said he could entirely confirm what Mr. McCombie had stated with regard to the unwarrantable detention of cattle in the transit by railway, and Norfolk being a very long way from Aberdeen, he had himself been a recent sufferer. The delay was most unaccountable, and what was most disagreeable was that they could not tell where the fault lay. Mr. McCombie at one end and he at the other made inquiries for six weeks. The result was that they found out that the cattle stopped at three or four different places. How long they stopped at each place and whose fault it was they were injured it was impossible to ascertain. Therefore when he heard of Privy Council Orders being issued he felt that it was a great deal easier to make an order than find people to obey; or to punish those who disobeyed. There was another case within his knowledge which was still worse. A gentleman started some cattle, of which he was the owner, at Norwich, for Deal, at six o'clock on Monday morning, and they arrived at Deal at two o'clock on Wednesday. The owner himself started from Norwich at seven o'clock and reached his own house, which was seven miles beyond Deal, at four that afternoon. What was done in the case of a passenger with a reasonable allowance for delay might be done in the case of cattle. With regard to the untrucking of cattle on their transit, he entirely agreed with Mr. McCombie that it was next to impossible, but trucks might be constructed in such a manner that cattle could be watered on the transit (A Voice: "Fed?"). He believed that the advantage of feeding had been greatly exaggerated (Hear, hear). If cattle were well fed before they commenced their journey, and again when they left the truck, the feeding in the truck was not necessary (A Voice: "In any moderate transit"). Yes, in any moderate transit either in England or Scotland. With respect to watering, however, he thought something should be done beyond what had yet been attempted by the Privy Council (Hear, hear). It was impossible to untruck a lot of cattle in order to water them at a layer; but he saw no reason why cattle should not be shunted at a junction, so that they might have a chance of drinking from an outside trough—supposing it to be impracticable, which he did not believe, to construct a cheap trough within the truck itself. They ought to impress upon the Privy Council the necessity of making the railway companies convey cattle to their destination without any unnecessary delay. Such delay as now occurred was the real grievance of which they had to complain; and as a practical man he maintained that if they could ensure a reasonably quick transit and a fair amount of water, they would have all they wanted (Hear, hear). But when they came to the other question—the transit of cattle by sea he must say, that he feared they would never be able to overcome the difficulties. They could not control the elements (Hear, hear). And although it might be true that there were some well ventilated ships, yet let anyone visit one of the wharves when cattle were unloaded, and he would find that a great deal of the ventilation was of the most wretched description. He did not believe that the fact that cattle which came from Ireland were so subject to disease was owing to any want of proper treatment on the part of the farmers of Ireland. The evil arose, in his opinion, in the transit across the Channel. He had, in his time, had a great number of cattle from Ireland, sometimes by the hands of his own drovers and sometimes by the hands of the ordinary dealers who came to Norwich Hill, and he maintained that let them do what they might they could not avoid a certain amount of serious accidents among cattle that had come to them by sea. In the course of the grazing of such cattle, they were sure to find out that some had been internally injured. If a lot of cattle were first exposed to what he might term "the dangers of the seas," and were afterwards exposed on the railroad to all the inclemencies of weather, they would no doubt be ready to contract the seeds of disease which they might receive in their

transit by boat or rail. So it was not to be wondered at that cattle from Ireland were attacked with pleuro-pneumonia more frequently than other cattle.

Mr. J. J. MECCHI said he was sure they all felt much indebted to the introducer of that subject. It was a very important subject, and should be treated on common sense principles. They knew practically that there was very little difference between animals and themselves, as regarded recurrence of appetite and regularity of feeding. They knew, that if they went without their breakfast or their dinner, or without rest, their physical condition was impaired, and they did not feel as they would do under other circumstances. The same principle applied to animals, and therefore, even when their esteemed friend (Mr. Read) said that if animals got water once in 30 hours, that was sufficient, and they could do without food, he would ask any gentleman present whether, if he went without breakfast, or dinner, or tea, and without rest, and had water only at the end of 30 hours (laughter) he would be in the same comfortable and saleable condition as he was then. To him it appeared perfectly absurd to draw a distinction in that respect between a mere animal and a human being. They all knew practically that success in feeding of animals and bringing them to perfection depended on extreme regularity in feeding. Animals were fed at six in the morning, fed in the middle of the day, and fed again in the evening before they went to rest, and the more that arrangement was disturbed, the less saleable they would be. They had heard that night that animals lost a stone of meat, worth 5s. every day, under the present mode of transmission. Would it not answer the purpose of the farmer to pay 2s. 6d. to a railway company to save a loss of 5s. by the end of the day? They could not call upon railway companies to make new arrangements to secure the delivery of animals in good condition at market, unless they paid them a proper amount, and he must say, it appeared to him a very profitable bargain for the farmer to pay half-a-crown in order to save 5s. There could be no doubt that the present mode of transmission was barbarous and inhuman; but the question was a money one, and railway shareholders looked for a dividend, and would expect a return for any outlay on improvements. As regarded the other question involved, he thought they ought to call to their aid some of the more intelligent and active members of the Royal Humane Society, in order that they might compel companies to make proper provision for animals.

Mr. T. CONGREVE (Peter Hall, Brinklow, Coventry) said Mr. Mecchi had compared a bullock to himself: he did not see the justice of the comparison (Hear, hear). Mr. Mecchi did not chew his cud (laughter), or if he did, he was an exception to the rule. There was another point on which he differed from that gentleman. He thought the worthy ex-alderman, and many in that room, would sometimes benefit very much by missing a meal or two (laughter). When anything was the matter with him (Mr. Congreve) he always omitted a meal, and he generally found benefit from that (laughter). The transit from his own neighbourhood to London was only about 100 miles, and there was not much to find fault with. Cattle left Rugby at 11 in the morning and were generally in London at 4 in the afternoon. He did not see why the journey should not be quicker, but still he did not complain. In 40 years he had had only one case of accident, sending as he did his cattle from home by his own men, and afterwards entrusting them to railway servants. In the course of the last week he had seen Mr. William Evans, of Anglesea, who was probably known to some present, and who had the longest transit out of North Wales. Mr. Evans' idea on this subject was that railways should be compelled to convey cattle something like 20 miles an hour continuously, inasmuch as he had found in the course of a long experience that animals were more bruised in stopping and starting than in any other way. The steam was up, the carriages stopped suddenly, and went bump, bump, and the result was that many cattle were wounded and shaken. The train should start quietly and stop quietly, and all shunting should be avoided. As to feeding on the transit he (Mr. Evans) considered it entirely out of the question. He would far rather that his beasts went for 25 or 30 hours without feeding than have them turned out of the truck to feed, because the fright would prevent them from eating, and because they would be more injured in getting in and out of the truck than they could possibly benefit by food. As to watering, if

some provision for that could be made, without the necessity of taking cattle out of the truck, it would be an advantage.

Mr. G. M. ALLENDER (Bayswater) said that at present all railway traffic was divided into two classes, viz., passenger and goods traffic, and in his opinion one great cause of the present evils was that cattle did not form a distinct branch of traffic. He had never heard any practical man complain of the want of watering or feeding for cattle. What was complained of was the shunting, and the delays in travelling. The necessity of continuous travelling was a very important point for that Club, and all who were interested in the transit of cattle, to urge upon railway managers, and in his opinion that object could not be attained unless cattle traffic were entirely separated from goods traffic.

Mr. H. NEILD (The Grange, Worsley, Manchester) said, having had some experience of the cross-country railway cattle traffic, he wished to say a few words on that subject. They must bear in mind that if they clogged railway transit with all their own fancies, they would do more harm than good (Hear, hear). He had himself experienced the inconvenience of delay; the transit from the North of Yorkshire to Manchester had taken from Saturday to Monday morning, and he had been dependent solely upon railway servants for any attention to the cattle during Sunday, who were perhaps not paid extra for Sunday work. He had begged railway managers to allow a truck to be attached to a passenger train; but the reply was that the managers of other railways objected to that, the ground of objection being the difference in buffers and couplings, also that in one case there was a cast-iron, and the other a wrought-iron, wheel. The three recommendations which he had heard that evening having a practical bearing, were that cattle trucks should be covered, that they should be closed at the ends, and that they should have wheels in harmony with the passenger-carriage wheels. He believed that with such improvements the difficulties of the cross-country traffic would be met. As regarded the cattle traffic from London to Aberdeen, he could not understand why, when passengers were conveyed in 16 hours, the conveyance of animals should occupy 30. He was sure that in ordinary cases it was not necessary to provide food for cattle during the journey, unless it were when Sundays intervened, in which case there might be special provision on the part of railway companies. He had known very great cruelty arise from one company opposing another, as regarded the attachment of carriages; and he believed that recommendations from the Club on that subject and others would have great weight.

Mr. C. HOWARD (Biddenham, Bedford) said he, like his friend Mr. Congreve, lived a very short distance from the metropolis, and therefore had had very little experience as to the long transits spoken of that evening; but he had had considerable experience of one thing. He had very often had cause to complain of the bill he had received from London, and they were now asked to advocate a very large addition to the charges made by railway companies, and thus to place themselves in a worse position than they were already (Hear, hear). If railway companies incurred a large expenditure in providing new cattle trucks, those who sent the cattle would have to pay for them (Hear, hear). Mr. Read had, in his opinion, shadowed forth what was required: that is, that cattle trains should pull up at certain stations, and that troughs should be placed handily for cattle to drink as they passed by. It appeared to him that that was the only thing that cattle needed, as Mr. Congreve had intimated animals that had been properly fed chewed the cud on the road, and did not require any solid food. He (Mr. C. Howard) hoped it would not go forth from that Club that it advocated an increased expenditure on cattle-waggons, for they might depend upon it that if expensive cattle-trucks were provided, farmers would have to pay for them (Hear, hear).

Mr. R. LEEDS (Wicken House, Castle Acre, Brandon) said for the last twenty years he had sent to London between four and five thousand sheep a-year and about 300 beasts without a drover, and the chief fault which he had found with the Great Eastern Company was that their charges were too high. His cattle and sheep started at six o'clock in the morning, and arrived in London about six o'clock in the evening.

Mr. J. K. FOWLER (The Prebendal Farm, Aylesbury) said he had the misfortune to be a director of a non-paying agricultural railway, and he could state that in that case farmers and dealers crowded and crammed their cattle on the trucks to such an extent as must excite the indignation of many who witnessed it (Hear, hear), the cattle being paid for at so much per truck, and not at so much per head. If cattle were classified as human beings were, as first, second, and third class, the farmer who used the first-class would have to pay an extra rate, and perhaps that would go far to meet the difficulty. As a purchaser of Shorthorns, he sent his cattle in a horse-box, and had to pay through the nose tremendously for such accommodation. If farmers wanted extra convenience, they must be prepared to pay for it. He thought there was a great deal in what Mr. Welch suggested with regard to the wheels of carriages, and it was most essential that some arrangement should be made under which small railways like that with which he was connected would be enabled to get their cattle trucks attached to trains which were going to London. Without that it would be impossible.

Mr. A. PELL, M.P., said it appeared unquestionable that a great deal of the difficulty and expense connected with the transit of cattle was occasioned by the train coming under the direction of different railway companies, and he was therefore surprised that a meeting like that, including so many practical and intelligent men from different parts of the country, the question of the amalgamation of railways or that of their absorption by the State, had not been mentioned. His own conviction was that the want of something of that kind was one of the inherent sources of the difficulties of the present system of transit. With regard to different methods of treating cattle, he agreed with Mr. Read, and disagreed with Mr. Mechi, on the subject of feeding. Mr. Mechi omitted to take into account the difference between men and cattle, and even the former could subsist for a time on their own fat (laughter). What Mr. McCombie described in reference to the transit of cattle on their journey from the north to London found its analogy in the treatment of human passengers on the Caledonian Railway. In the middle of the night the passenger and goods' carriages were so arranged that when the train pulled up you were knocked from one side to the other, and it was nothing but the excellent whiskey produced in the north enabled one to survive such treatment (laughter). Even in the midland counties, where the journey was short, the state of things was not very much better. Such were the inconveniences that existed that in sending cattle to the fens it was his practice to send over-night for a mule or two on the road to the farm of a neighbour; thence they walked to Kettering, ten miles further on; after that, they travelled by the line to St. Ives, and after that they had another walk of ten miles; but he could thus always put his hand on them. He had no choice between the walking twenty miles and the subjecting his cattle to the evils of three different railways, with all the interruptions of traffic.

Mr. W. HARTER (Bury, Lancaster) said it had been remarked, in effect, by Mr. Charles Howard that if cattle were conveyed in first-class carriages the owners must pay first-class fares. He should like to know the comparative cost of Mr. Reid's and Mr. Welch's improved trucks, and those now generally used. If it could be shown that improved trucks could be provided at a very slightly increased cost, railway companies might thus be induced to adopt them.

Mr. SIDNEY (Islington) was very much surprised to find himself assuming the position of a speaker on that occasion, and he should not have done so but for the remarks of Mr. Pell. He ventured to say, that the only thing needed to secure the removal of the grievances of farmers in connection with the transit of cattle by railway, was that farmers should make up their minds as to what they really wanted. The great difficulty on all farmers' questions was that farmers only agreed to differ. They were exceedingly dissatisfied with certain things as they existed. Mr. Pell thought that a remedy was to be found for every evil in the amalgamation of railways, and their being turned over to the Government (Mr. Pell: "No"). He believed he was correct in saying that Mr. Pell looked forward favourably to the transference of railways to the Government.

Mr. PELL, M.P., said Mr. Sidney mistook him. What he said was, that he was surprised that the question of amalga-

mation, or of the absorption of railways by the State, had not been dealt with. He did not say that he was in favour of either one or the other.

Mr. SIDNEY continued: There could not be the slightest doubt that, if cattle trains ran continuously, it would be much more convenient; but let farmers who were inclined to advocate the transfer of railways to the Government ask themselves what chance there ever was of getting any money back from the Post-office or the Telegraph department, and beware of exchanging King Log for King Stork. They might squeeze something out of the railway companies, but let anyone who had lost a letter or a telegram, and complained, say whether they were likely to get anything out of the Government.

Mr. READ, M.P., in answering a question that was put to him, said that the cattle he obtained from Mr. McCombie were 90 hours on the rail, as he believed without food or water. It certainly was in the month of November, but he was astonished to find how little they appeared to suffer. He never saw a lot of cattle walk home better. On the other hand, he got some cattle from Ireland in the month of June, and so much did they suffer in their passage across the Channel that one died within two days after his arrival, and some of the others had hardly yet recovered from the effects of the voyage.

Mr. C. M. CALDECOTT (Holbrook Grange, Rugby) said what farmers wanted was continuous transit, instead of their animals being shunted and kept back for hours; and he did not believe that was possible without an independent line of rails. Arrangements had been ostensibly made by many railway companies for the watering and feeding of cattle, but practically they were not carried out. Having some authority himself at Rugby, he would pledge himself that if any regulations were forwarded there under the authority of the Government or of the Legislature they should be enforced.

The CHAIRMAN, in summing up the discussion, said he was sure they all felt indebted to Mr. Welch for the care and ability with which he introduced the question. He agreed with Mr. Congreve that sometimes a little abstinence did a great deal of good, and the principle involved in that had a bearing on the question of the feeding of cattle during transit. He thought that all of them who had had any experience of branch lines must be aware of the inconvenience which attended the transit of cattle on such lines, and he agreed with Mr. Fowler that any improvement, or anything by which the evils of the transit on such lines might be avoided, was worth paying for. He thought that if a copy of that discussion were sent by their excellent Secretary to the managers of railway companies it would be likely to produce a good effect as showing what were the opinions of some of the leading members of the Farmers' Club on that subject.

Mr. WELCH, in replying, expressed his conviction that the improvements which he had advocated might be carried out without making any important addition to the expenses of railway companies, and his satisfaction at having elicited the opinions of so many eminent practical agriculturists.

Mr. C. S. READ, M.P., in moving a vote of thanks to Mr. Welch, supplemented the suggestion of the Chairman by recommending that a report of the discussion should be sent to the Privy Council.

Mr. T. CONGREVE seconded the motion, and it was adopted unanimously.

The proceedings terminated with a vote of thanks to the chairman.

THE HORSE-DEALER'S LICENCE.—At the meeting of the Committee of the Farmer's Club, on Monday, March 4, a letter was read from the Chancellor of the Exchequer's office acknowledging the receipt of the memorial and report, and stating that Mr. Lowe requested it might be made known to the committee and the members of the Club that an order has been issued by the Board of Inland Revenue, which he hopes will give the relief required. The effect of the order is that farmers will be relieved from the Horse-dealers' Duty in respect of sales of fillies and colts under five years old which have been stocked on the farm.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: Wednesday, March 6, 1872.—Present: Sir Watkin W. Wynn, Bart., president, in the chair; Lord Chesham, Lord Kesteven, Lord Tredegar, Lord Vernon, the Hon. Wilbraham Egerton, M.P., the Hon. H. G. Liddell, M.P., Sir T. Dyke Acland, Bart., M.P., Sir Massey Lopes, Bart., M.P., Sir A. K. Macdonald, Bart., Mr. Barnett, Mr. Bowly, Mr. Cantrell, Colonel Challoner, Mr. Dent, M.P., Mr. Druce, Mr. Brandreth Gibbs, Mr. Hoskyns, M.P., Mr. Bowen Jones, Colonel Kingscote, M.P., Mr. Leeds, Mr. McIntosh, Mr. Milward, Mr. Pain, Mr. Randell, Mr. Ridley, M.P., Mr. Shuttleworth, Mr. Stone, Mr. Thompson, Mr. Torr, Mr. Jabez Turner, Mr. Wakefield, Mr. Earle Welby, M.P., Mr. J. Wells, Mr. Wells, M.P., Colonel Wilson, and Dr. Voelcker.

Mr. A. Henry Browne, of Bank House, Acklington, was elected a Governor of the Society.

The following new members were elected:

- Brewitt, T. B., Sanham House, Melton Mowbray.
- Cockrane, M. H., Montreal, Canada.
- Cocks, John, Dinchope, Wistaston, Salop.
- Crisp, John, Acklington.
- Cooch, J., Harlestone, Northampton.
- Chrisp, Robert, Gedgrave Hall, Wickham Market.
- Dufelman, Durrant, Swaffham, Brandon.
- Eden, Frederick Morton, Boughton House, Kettering.
- Edwards, Graham Betham, The High House, Bredfield, Woodbridge.
- Egerton, the Hon. Wilbraham, M.P., Rostherne Manor, Knutsford.
- Epton, Robert James, Newball, Lincoln.
- Heathcote, Robert Boothby, Friday Hill, Chingford, Woodford.
- Jones, Frederick, The Old Hall, Hanmer, Whitechurch, Salop.
- Jones, William, Cefullogell, Castletown, Cardiff.
- Laxton, Clement, Pitchbeck West, Spalding.
- Liddell, George, jun., Great Chilton, Ferry Hill.
- Martin, George H., Little Downham, Ely.
- Rix, George, Gaytonhorpe, Lynn.
- Robinson, Richard, sen., Sedgebrook, Grantham.
- Savidge, John, Gopsall, Atherstone.
- Stant, George, Coiton, Ulverston.
- Thomas, John, Glanrynis, Kidwelly.
- Whitcombe, George, Tully, Gloucester.
- Williams, John, Caerady, Cowbridge.
- Williams, John, Llantrithy, Cowbridge.
- Windover, Charles S., Huntingdon.
- Wippell, Henry, The Barton, Alphington, Devon.
- Wright, Sampson, High Oon, Church Eaton, Staffs.
- Yorath, Henry, 13, St. John Street, Cardiff.
- Youngman, James William, West Acre, Brandon.

FINANCES.—Colonel Kingscote, M.P., presented the report, from which it appeared that the Secretary's receipts during the past month had been examined by the committee and by Messrs. Quilter, Ball, and Co., accountants, and were found correct. The balance in the hands of the bankers on February 29 was £1,285 16s. 11d., £2,000 remaining on deposit at interest.

JOURNAL.—Mr. Thompson (chairman) reported that the judges of farms had completed their first tour of inspection on the 7th of February last, and that out of the nineteen competing farms they had selected such as were considered deserving of a further visit. The committee had inspected the specimen of Bennett's portable thatching sent to Hanover Square for inspection by the members of the Society, and they recommended that £3

be given to the inventor for the expense and trouble he has incurred. This report having been adopted, Mr. Thompson read a list of the newspapers to which the Society's *Journal* had hitherto been sent, and then moved the following resolution: "That copies of the *Journal* be no longer given to any but Agricultural Papers, and that the carrying out of this resolution be left to the *Journal* Committee." This resolution having been seconded by Mr. Torr, was carried unanimously.

CHEMICAL.—Mr. Wells, M.P. (chairman), reported that the committee had endeavoured to offer to the Council forms of guarantee which dealers in manures and feeding-stuffs may give to purchasers. They feel the great difficulty of drawing out such forms as will meet all cases. The variety of articles is now so great, and their constituent qualities so different, that it is almost impossible to meet every subject. The purchasers of any of the articles are strongly advised to have analyses made of their purchases, and to take the samples with care. In the case of artificial manures, they should take a large handful of the manure from three or four bags, mix the whole on a large sheet of paper, breaking down with the hand any lumps present, and fold up in tin-foil or in oiled silk about 3 oz. of the well-mixed sample; place the mixed manure in a small wooden or tin box, which may be tied by string, but must not be sealed, and send it by post. If the manure be very wet and lumpy, a larger boxful, weighing from 10 to 12 oz., should be sent either by post or railway.

In the case of oilcakes, they should take a sample from the middle of the cake. To this end, break a whole cake into two, then break off a piece from the end where the two halves were joined together, and wrap it in paper, leaving the ends open, and send the parcel by post. The piece should weigh from 10 to 12 oz.

In the case of feeding meals about 3 oz. will be sufficient for analysis. Enclose the meal in a small linen bag, and send it by post.

On forwarding samples, separate letters should be sent to the laboratory, specifying the nature of the information required, and, if possible, the object in view. This report having been adopted, the following forms of guarantee were submitted to the Council, and were ordered to be supplied to applicants at a charge of 1d. each, or 1s. the set.

1.—LINSEED CAKE.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to deliver ton^s of pure linseed cake as above, in good condition, that is to say: Cake which is made from "clean" linseed and nothing else, is free from mould, and is not otherwise spoiled for feeding purposes.

Signature of vendor

2.—RAPE CAKE FOR FEEDING PURPOSES.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to deliver tons of rape cake fit for feeding purposes, as above, in good condition, that is to say: Cake which is made from rapeseed which is free from an injurious quantity of mustard or other prejudicial matters, is free from mould, and is not otherwise spoiled for feeding purposes.

Signature of vendor

3.—DECORTICATED COTTON CAKE.

Vendor's name
Address
Quantity.....
Price per ton.....
Terms.....
Date of purchase

I, the undersigned, hereby guarantee to deliver tons of pure decorticated cotton cake as above, in good condition, that is to say: Cake which is made from clean decorticated cotton seed, and nothing else, is free from mould, and is not otherwise spoiled for feeding purposes, and is equal to the sample furnished by me to the purchaser.

Signature of vendor

N.B. Purchasers are recommended not to buy this cake except by sample.

4.—UNDECORTICATED COTTON CAKE.

Vendor's name
Address
Quantity.....
Price per ton.....
Terms.....
Date of purchase

I, the undersigned, hereby guarantee to deliver tons of pure undecorticated cotton cake as above, in good condition, that is to say: Cake which is made from clean undecorticated cotton seed, and nothing else, is free from mould, is not otherwise spoiled for feeding purposes, and is equal to the sample furnished by me to the purchaser.

Signature of vendor

N.B. Purchasers are recommended not to buy this cake except by sample.

5.—RICE-MEAL.

Vendor's name
Address
Quantity.....
Price per ton.....
Terms.....
Date of purchase

I, the undersigned, hereby guarantee to deliver tons of pure rice meal as above, in good condition, that is to say: Meal that is free from all matters not found in rice, and that is equal to the sample furnished by me to the purchaser.

Signature of vendor

N.B. Purchasers are recommended not to buy this meal except by sample.

6.—BONES or BONE DUST.—Bones and bone-dust are usually sold either as raw or green bones, or as boiled bones. The latter is made from bones, the gelatine of which has been extracted to a great extent by high-pressure steam, and is cheaper than raw bone-dust.

Vendor's name
Address
Quantity { Raw bones, ½ inch.....
 { Raw bones, ¼ inch.....
 { Raw bone-dust.....
 { Boiled bones.....
Price per ton.....
Terms.....
Date of purchase

Raw or Green Bones or Bone Dust.—I, the undersigned, hereby guarantee to supply tons of pure raw bones, being ½ inch or ¼ inch, or fine bone dust, as above, containing not less than 45 per cent. of tribasic phosphate of lime, and yielding not less than 4 per cent. of ammonia.

Signature of vendor

Boiled Bones.—I, the undersigned, hereby guarantee to supply tons of pure boiled bones, as above, containing not

less than 48 per cent. of tribasic phosphate of lime, and yielding not less than 1½ per cent. of ammonia.

Signature of vendor

7.—DISSOLVED BONES.—Dissolved bones are made of various qualities, and sold at various prices per ton, and for these reasons the quality should be guaranteed.

Vendor's name
Address
Quantity.....
Price per ton.....
Terms.....
Date of purchase

I, the undersigned, hereby guarantee to supply in a sufficiently dry and powdery condition, to admit of ready distribution by the drill or for hand-sowing, tons of dissolved bone at per ton, which shall contain—

- 1. per cent. of soluble phosphate of lime.
- 2. per cent. of insoluble phosphate of lime, present entirely as boiled or raw bone, and not as bone-ash, coprolites, or other mineral phosphates.
- 3. per cent. of nitrogen equal to per cent. of ammonia.

In case of deficiency, I agree to allow for each unit per cent.—

- (1) of soluble phosphate per ton,
- (2) of insoluble phosphate per ton,
- (3) of ammonia per ton,

which the dissolved bones are found on analysis to contain less than the guaranteed percentage of soluble phosphate of lime in a fairly drawn sample, taken within three days after the delivery of the bulk.

Signature of vendor

N.B. The sample for analysis should be taken by emptying several bags, mixing the contents together, and filling two mustard tins full in the presence of a witness: both to be sealed, one to be forwarded to for the determination of its constituents, and the second to be kept for reference.

8.—MINERAL SUPERPHOSPHATES.—Purchasers are recommended to buy mineral superphosphates on the basis of a guaranteed percentage of soluble phosphate of lime, at so much per unit per cent., and to attach no value to insoluble phosphates.

Vendor's name
Address
Quantity.....
Price per ton.....
Terms.....
Date of purchase

I, the undersigned, hereby guarantee to deliver in a sufficiently dry and powdery condition, to admit of ready distribution by the drill, or for hand-sowing, tons of superphosphate of lime, as above, which shall contain per cent. of soluble phosphate of lime; a deduction of being allowed for every unit per cent. which the superphosphate is found on analysis to contain less than the guaranteed percentage of soluble phosphate of lime in a fairly drawn sample, taken within three days after the delivery of the bulk.

Signature of vendor

N.B. The sample for analysis should be taken by emptying several bags, mixing the contents together, and filling two mustard tins full in the presence of a witness; both to be sealed, one to be forwarded to for the determination of soluble phosphate, and the second to be kept for reference.

9.—COMPOUND ARTIFICIAL MANURES.

Vendor's name
Address
Quantity.....
Price per ton.....
Terms.....
Date of purchase

I, the undersigned, hereby guarantee to supply, in a sufficiently dry and powdery condition to admit of distribution by the drill, or for hand-sowing, tons of as above, to contain per cent. of soluble phosphates, per cent. of insoluble phosphates, per cent. of nitrogen.

In case of deficiency, I agree to allow for each unit per cent.—

- (1) of soluble phosphates per ton,
- (2) of insoluble phosphates per ton,
- (3) of ammonia per ton,

which the manure is found, on analysis, to contain less than the guaranteed percentage of soluble phosphate of lime in a fairly drawn sample, taken within three days after the delivery of the bulk.

Signature of vendor

N.B.—The sample for analysis should be taken by emptying several bags, mixing the contents together, and filling two mustard tins full in the presence of a witness; both to be sealed, one to be forwarded to _____ for the determination of its constituents, and the second to be kept for reference.

10.—NITRATE OF SODA.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to supply _____ tons of nitrate of soda, as above, to contain from 94 to 95 per cent. of pure nitrate.

Signature of Vendor

11.—SULPHATE OF AMMONIA.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to supply _____ sulphate of ammonia, as above, to contain not less than 23 per cent. of ammonia.

Signature of Vendor

12.—SHODDY.—The quality of shoddy or wool-refuse manure varies greatly, and its value mainly depends upon the amount of nitrogen which a sample contains.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to deliver _____ of shoddy as above, in a dry condition, containing _____ per cent. of nitrogen (equal to _____ per cent. of ammonia) at _____ per unit per cent. of ammonia; a deduction of _____ being allowed for every unit per cent. which the shoddy is found on analysis to contain less than the guaranteed percentage of ammonia in a fairly drawn sample, taken within three days after the delivery of the bulk.

Signature of vendor]

13.—PERUVIAN GUANO.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to supply _____ tons of genuine Peruvian guano, as above, the said guano to contain _____ per cent. of ammonia, and to be in a dry and friable condition.

Signature of Vendor

14.—REFUSE MANURING MATTER.

Vendor's name
 Address
 Quantity
 Price per ton
 Terms
 Date of purchase

I, the undersigned, hereby guarantee to supply _____ tons of _____ manure, as above, the said manure to contain

per cent. of phosphate of lime; _____ per cent. of nitrogen, equal to _____ per cent. of ammonia; and not more than _____ per cent. of moisture.

Signature of vendor

The Quarterly Report of the Chemical Committee was presented.

VETERINARY.—Mr. Thompson reported that the committee had received a letter from Prof. Simonds, enclosing two resolutions from the governors of the Royal Veterinary College, which announced the appointment of Prof. Simonds as Principal of the College on certain conditions, which prevent his retaining the post of Veterinary Inspector to the Royal Agricultural Society. The committee therefore recommended that the grant to the Royal Veterinary College be made for one year, on condition that one of the professors of the Royal Veterinary College be allowed to act as the Veterinary Inspector of the Society, and that the veterinary privileges of members remain substantially as heretofore, but with some alterations which had been suggested by the committee, and which they recommended should be sent to the governors of the College for approval. The committee also recommended that Prof. Simonds, the newly-appointed Principal of the Royal Veterinary College, be appointed Consulting Veterinary Surgeon to the Society.—This report was adopted.

GENERAL, CARDIFF.—Lord Vernon (chairman) reported that the London and Provincial Bank (limited) had offered a prize of twenty guineas for competition at the Cardiff meeting, the subject of the prize to be left to the selection of the Society. This offer having been made too late for insertion in the prize-lists for stock and implements, the committee recommended that the donors of the prize, in conjunction with the local committee, be requested to select a subject for an essay, to be submitted to the Council at their next meeting. The committee also recommended that the surveyor be instructed to report to the local authorities the railway accommodation required for the arrival and departure of stock and implements at Cardiff; and that the secretary be authorised to make the requisite arrangements for the supply of refreshments at the Cardiff meeting.—This report was adopted.

SPECIAL COMMITTEE ON RECEIPTS AND EXPENDITURE.—Lord Vernon (chairman) reported that the Committee had considered the reports previously presented, that they had received further reports from the finance committee, the veterinary committee, and the secretary, and that they hope to present a full report to the Council at their next meeting.—This report was adopted.

HOUSE.—Col. Kingscote, M.P., reported the recommendation of the committee that the basement storey be thoroughly cleaned and put in order.—This report was adopted.

EDUCATION.—Mr. J. Dent-Dent, M.P., reported that three candidates had entered for the Society's Educational Examination to commence on the 16th of April. Two of the three candidates are eligible for the Society's prizes, being under the age of 21. The committee recommended the appointment of the usual examiners.—This report was adopted.

Mr. Thompson then moved, "That towns competing for the county meetings of the Society, be no longer required to send deputations to attend the monthly council in May." He supported this change by urging the great unnecessary inconvenience to which gentlemen connected with competing towns were annually put, as the useful information which they gave could be better obtained by letter. Mr. Randell, in seconding the resolution, also laid stress on these points, and urged that by adopting the proposed change the business would be done better and more definitely, as the inspecting committee would put the questions in writing, and thus there would be less

discussion with local committees afterwards. Col. Kingscote, while agreeing generally with the resolution, thought that one or two representatives of each town should attend and answer questions, a view which was also supported by Mr. Torr, Mr. Cantrell, and others. Mr. Thompson having agreed to Col. Kingscote's suggestion, the following words were added to the resolution: "but that not more than two representatives from each of the competing towns be requested to attend to answer questions, if required." The resolution was then put from the chair, and carried unanimously.

A committee, consisting of the stock prizes and implements committees, was appointed to recommend judges of stock, implements, &c., at the Cardiff meeting.

A letter was read from the secretary of the Austro-Hungarian Embassy, enclosing the prize list of a general exhibition of dairy produce, to be held at Vienna next December, and inviting English dairy-farmers and others to compete for the prizes which are open to general competition. The usual Easter holiday having been given to the secretary and clerks, the Council adjourned until Wednesday, April 10.

THE MAIDSTONE FARMERS' CLUB.

THE AGRICULTURAL LABOURER.

At the last meeting, at the Star, Maidstone, Dr. Monckton delivered an address upon "The Status and Condition of the Agricultural Labourer," Mr. T. Bridgland in the chair.

Dr. Monckton said that, when urged by the energetic president of the Farmers' Club to stop a gap in the programme for the season, he had just been reading some letters in *The Times* and other journals, discussing the state of the farm labourer in a tone not complimentary to his employers and friends; containing, as was too common, an implied assumption that he belonged to an oppressed or neglected race; that he was, from a civilization point of view, a blighted outcast, a *monstrum informe cui lumen ademptum*. While admitting at once that the character and condition of the labourer required anxious efforts for improvement, he must affirm at starting that the town dwellers and the city newspapers had not the feeblest title to plume themselves on the superior condition of their own working population. Taking England throughout it was probably true that the country labourer was more cleanly, moral, healthy, and happy than his fellow of the towns; within his own, not very narrow, experience certainly and positively this was the case. The labourer's dwelling, so much, and often so deservedly, abused, was healthier in the country than in the towns; was less over-crowded, and less antiseptised; the cottages themselves had been greatly multiplied and improved during the last generation, and their situation in an ocean of fresh air, instead of a dense dark alley, gave them an advantage that it was not possible to over-rate, and one that was carried still farther by the muscular and out-of-door life that the people pursued. In estimating the condition to which any class had attained, it would never do to judge solely by the number of shillings earned per week. Hard and plain observation, at the hospital among other places, had convinced him (Dr. Monckton) that more outward evidence of squalor, of unhealthy disquiet, and of general wear-and-tear was to be seen among the lower town-classes than among the rustic labourers; and if the former were followed to their homes, those homes were not only, in many cases, dirtier, darker, and closer than the country cottage, but far more oppressively crowded with lodgers and alien occupants; particularly might this be seen in London and the very large manufacturing towns. Neither was it correct to adopt a certain sort of intelligence or smartness as sufficient evidence of class superiority. Agriculture separated, while commerce aggregated its votaries; the former state rendered men taciturn and undemonstrative, the latter promoted a flashy sharpness, and it could not at all be conceded as certain that such sharpening was wholly for the good of the individual or the community. Let them compare for a moment the monkey and the sheep, and it would be seen at once that restless energy might be combined with pettiness and mischief, while stolidity was quite compatible with peace to the individual and benefit to the world. He (Dr. Monckton) was certainly inclined to go in for the sheep. It must also be remembered that the farm labourer was affected in the circumstance and seeming of his life, by the fact that everything agricultural was lightly endowed with cash. The landlord took 2½ per cent. per annum from his land, instead of 10 per cent. from commerce; many a tenant farmer in the kingdom failed to net 20s. a-week in cash, after his lodging and some of his food had been provided by the

farm—all the sons of the soil looked to live and enjoy, under conditions which the soil and the country furnished, and into the measure of which cash and luxuries only entered to a very partial extent. How many, for instance, of the middle classes, could find a healthier, happier, brighter life in the country on £700 a-year, than £1,400 would command in the towns? No politician, writer, or social philosopher is justified in contrasting the two classes of artisans without recognising that in a certain, but not an invidious sense, the farmers work with the residuum. It is perfectly natural and fitting that the higher pay and inducements of the town should tempt away the smarter lads from the sickle and the plough, and the regular supply of such precious material should be credited to the land at a high figure in the ledger of the State; but it is neither natural nor fitting that having abstracted for their own purposes the most enterprising members of the labouring classes, the remainder should be expected to cut an equally distinguished figure. Neither, in a consideration of this matter, must it be forgotten that, whatever the condition of the labourer may be, it is not stagnant but progressive. In education, wages, dwelling-house, and independence he is, by the operation of natural causes, rapidly and steadily improving. He is in the important matter of health and death-rate already far more favoured than his brother of the towns. Take Liverpool, one of the most important and thriving towns of Europe; the mortality there, something like forty per thousand, had become so alarming, that last year the Town Council employed two high authorities (Drs. Parkes and Sanderson) to investigate and report upon the matter. The *British Medical Journal* thus speaks of the results: "It is impossible to read without an almost hopeless sinking of the heart that calm, clear, pitiful, and sombre report in which the irresistible mass of evidence leads to the conclusion that at the bottom of the fearful excess of mortality in that wealthy and intelligent city, lies the one widespread curse of intemperance. The people herd together like brutes, they couch at night in flocks in miserable crowded and fetid rooms. They have neither food, furniture, nor clothing; their children are killed off in hecatombs by exposure, slow starvation, and neglect, because husbands and wives, fathers and mothers, earning regularly from twenty to twenty-seven shillings a-week, and often more, waste their substance in drink, brutify themselves with alcohol, and sink habitually by tens of thousands into the most fatal disregard of the habits of life necessary to health, to mortality, and public safety." Verily they that live in glass-houses must not throw stones. Perhaps the best way of testing whether the farmer acts justly by his workman is to seek an answer to the question whether the latter does or does not generally receive a full equivalent for the value of the labour he is able to supply. Of course this point is not so easy and simple to solve as in the case of many manufacturing matters, but reasonable conclusions might be drawn by anyone thoughtfully estimating the value of crops and the proportion of cost which labour represented in their production. Probably little difficulty would be found in showing that the labourer's pay, taking all the year, came fully up to, or exceeded, a fair valuation of the work he did. This being so, no rise of wages could take place under existing circumstances without a dead loss to the employer. How then could effort be made to im-

prove the status and raise the income of the labouring man? The answer seems plain and inevitable—*increase the value of his work.* But how again can this be done? 1. By making him a better workman in the matter of individual tasks. Seize systematically every method for making men dexterous at sowing a field, ploughing a furrow, mending a harness, sharpening a hop-pole, foddering a bullock, and managing a yard of dung. This was not a matter of vague generality, but of hard fact. He (Dr. Monckton) had seen with his own eyes, within twelve months, important tasks so badly done that double the wages might have been paid for good work with profit to the farmer. He had seen wurzel seed so unevenly drilled in point of depth, that five times the man's daily pay was thrown away, because he had never been taught that mere holding straight was not drilling, but that regular and *shallow* deposit of the seed was even more essential. He knew a hop-garden of favourable clays, and not of running sand, that had been drained three times in nine years, because of the imperfect fall secured on the earlier occasions. He had seen last season gangs engaged in hop syringing: the work accomplished by one gang would be more cheaply paid for at a pound a day than that by the others at a crown. Again, why should not every farm of reasonable extent see that some of its hands could thatch, or stack, or build a pig-sty, or paint a waggon, or shear a sheep, or mend a fence? It had been too much the custom for a whole parish to depend on one thatcher and sheep shearer, who often earned 30s. in three days, and was drunk for the rest of the week. Surely our own workpeople might be enabled to benefit by these rather better paying jobs. A great industry had sprung up in the country in the use of creosote. How many of those now listening had ever so studied the matter as to know the very best time, temperature, and method, for the process? He had himself seen professors of the art, men who let out tanks, and took contracts for their neighbours, and who did not even know what a thermometer was, and yet pole-dipping could never be done to the best advantage without its aid. Many workpeople in charge of those tanks now receiving 2s. 6d. a day, would be better worth 4s. if rendered more observant, more painstaking, and better instructed. But this leads us to the second method of augmenting the value of the workman's toil, viz., a more skilled and studied direction of his tasks. Of course it was clear in connection with what had already been said that the master must instruct himself, and exercise increasingly his own wits as well as those of his workman and this feature must never be blinked. Not only morally, but in business aptitude, the man will be what the master makes him. Take a clutch of pointer puppies and give four away to four different people; the value of their labour in two years will depend almost entirely upon the pains and skill with which their respective masters have set and kept them to their work. An army of soldiers may be of exemplary skill and courage, and yet see their efforts nullified by unwise or insufficient planning and direction. In the matter of labour a farmer must be exercising a perpetual foresight to make his operations dovetail and harmonise. The job of to-day must be habitually so done as to render more cheap and effective the work of to-morrow. Labour so directed will yield value and show a result. Without such management men, though industrious and well enough master of each particular task, will inevitably muddle away time, and waste money *laboriose nihil agendo*. 3. Another mode of increasing the productiveness of so many hours' toil is to call in the aid of machinery. This applies to matters small and great, from the turnip cutter to the steam plough. The man who sows corn broadcast leaves a full task of hoeing and cleaning to be done another day; he who follows the drill may be said to perform half the operation of hoeing at the same time. A big lad in charge of a tedding machine will outstrip a regiment with forks and rakes. We need only dwell upon this to remark much has been done, but much remains to do. 4. Men will be more pleasant helpmates to the farmer, and more profitable aids, if their intelligence has been evolved by some early education. Their labour will be worth more, and they will win, without loss to their master, a higher wage (I hear, hear). Murmurs of approval were really welcome here, as it was quite possible for this affirmation to have missed the assent they had previously been kind enough to yield. Education was inevitable—it was not only coming, but had come. It was wisest to accept the inevitable, and to profit by it. This would not be an irksome task to those who thought with him that technical instruction

to the man ought to be prefaced by some mental training to the boy—that reading, writing, and arithmetic were to the business teaching of later life what draining and the subsoil plough were found to be in preparing for the future plantation of hops, not part of the hop-growing itself, but a most profitable and necessary introduction. It would be far better for the farmer to interest himself in and guide the education of his poorer neighbours, than to suspect, and keep aloof from, the movement. Apart from the foregoing principles of relationship, though not apart from the very important principle of mutual sympathy and good feeling, are little details that come to mind in connection with this subject. Are there not many commodities which the farmer might help his man to purchase, and thereby give him a lift? Coals, for example, could they not be bought for labourers at wholesale price, and the carriage be given in? Perhaps sugar, bacon, and calico the same. Australian meat, like education, is becoming a fact. It might easily be looked upon as a competitor and an enemy; better give it a welcome, and turn it into a friend. Might not this be procured by a large farmer in considerable quantities, and sold to such of his men as chose to have it at cost price? Its arrival in this country will be an unmixed blessing if it be added to the amount of meat consumed, *i.e.*, if the artisans eat that at an easy price, while the wealthier classes consume as much as ever of home-grown meat at the present price. This end ought to be promoted, and its competition in the market disarmed, if the farmers with one consent bought it up, and supplied their labourers. After describing a stove that he thought might be very usefully introduced into cottages, Dr. Monckton besought his hearers on several grounds to discourage beershops, and, at least, to refrain from weakly consenting to sign requisitions for fresh licences in cases where they knew that an excessive number already existed. He concluded, amid vociferous applause, by submitting for discussion by the meeting the four following propositions: 1. That the labourer holds a fair position in the agricultural community, and one that is progressing in comfort and respectability as rapidly as other sections of that community. 2. That, as a general rule, the labourer receives a just equivalent for the value of the work he is able to supply; that, therefore, as a commercial necessity, his labour must rise in value before his wages rise in amount. 3. That no political change or combination would be calculated to improve his condition: such improvement must begin in himself, and will then be reflected upon his circumstances. 4. That education need not be feared as tending to disqualify the workman for his duties so long as the teaching of the school is broad and simple, and followed by the best possible technical instruction in later life.

Mr. CHITTENDEN said that after such an able lecture he could add little except by way of endorsement. One subject that Dr. Monckton had alluded to had often been to him a very painful subject to reflect upon, and no doubt it had to many of them, the imputation cast upon the employers of labour as to the way they treat men who work for them. It was a subject he had very often thought about, and not only thought about, but it had set him looking into his books to see if he had not got something down that did not belong to him; but he found, taking the course of several years, that he had not got anything in his books which ought to belong to the labourer; and the results did not show such a product upon his capital, and the small intelligence he had, as they ought. As he went on day by day he kept still the same idea in his head, and asked himself if he was giving each man working for him the value of his work, or was he keeping what belonged to him? He could say emphatically, and endorse what Dr. Monckton had much more ably demonstrated to them, that each labourer had the full value in money of the work which he performed, and he felt sure the results of such inquiries by most of them would be the same. But while coming to that conviction, he had not dismissed from his mind that he should like to pay his men more money. The only way he could see to arrive at that desired result would be, as had been so ably pointed out, that they should have more intelligent labourers, labourers taking more interest in what they were doing, and having more skill to do it. He hoped they were somewhat moving in that direction. He knew very well that the way to obtain that skilled labour was to educate the man better, and put him with something that would draw forth his intelligence, and produce larger results

—to put him with machinery. In that way, the value of the work of men who when put to certain employment upon a farm had been 15s. or 16s. a-week, had been raised to 24s. Of course, they could not raise the labourers' wages by taking money out of their own pockets, but they might do so by getting machinery which would do the work more satisfactorily, and by getting more intelligent men to perform it. He assured them that the way in which the question of farm labour was put before the country generally was distressing to men employed in that pursuit, and he looked forward to the time when they would be able to do more, as they were doing day by day, for their labourers, by giving more money to the best labourers, and finding more jobs for them to do. There was nothing like a man who could do good work, and earn good money. He was the man the employer wanted. They looked through their own labourers, and saw that some men took 12s. or 13s. as their earnings, while another man earned a pound. Why was that man earning one pound? Because he had had the best work, and because he could do it better. He regretted the one-sided manner in which the subject was discussed in the plough field, but it was their earnest desire to benefit their labourers, and, if they could fairly do so, to give them more money. They saw a good many lads growing up around them whom they marked down as sharp lads, but, after a while, they found that they had migrated to the town, and their brothers, who were not quite so sharp, were left. He would say one word with regard to education, and he accepted it as a thing which must come, as the inevitable. He welcomed it as such, but from his own experience he welcomed it in hope, and perhaps a little in fear, for it generally happened that some one else got the good scholars, and that very few fell to the lot of the shepherd or ploughman.

Mr. HAYES said, as opposition sometimes did a little good, he begged to differ from Dr. Monckton, and from ninety-nine persons out of a hundred, in holding that the beershops did all the evil. There was no doubt the beershops did a great deal of harm, but he was not quite certain whether repressive measures were required. There was a time when their grandfathers could not have sat round a table like that, after Maidstone market, and gone home sober, and the improvement had not been because the public-houses were shut up, but because, from some cause or other, they had ceased to care for drunkenness. If they could by any means persuade those who did not get drunk to leave it off, he thought it would be better than repressive measures. He would much rather see a man become good, not by the force of the law, but because of the good itself. He thought it would be a good thing if every shopkeeper were allowed to sell beer over the counter, in the same way as he sold a pound of sugar or any other provisions, so that the labourer might carry his beer home to his house, so as to do away with the beershop or, at least, cause them to sell a better article, because the competition would compel them to sell good beer. One point struck him, that was, that the labourer was already much improved. If they looked back 50 years ago, when reckoning time came to settle with the men, each one brought his score on a notched stick, but now nearly all their men brought their accounts neatly written out. Then again, in reference to the cottages, the time was when the floor was entirely bare, but now in nineteen out of every twenty cottages there was some sort of carpet placed under the wife's feet, and the walls instead of being dirty were papered. He thought the labourer had improved his condition; and any persuasive measures they could adopt to assist him to go on doing so he thought were all very well. With reference to the subject of education, he thought it was very necessary, but they must understand what education really was. There was a book-learning which was simply book-learning, but what was wanted was a practical education with a little book-learning. The lecturer had thoroughly exhausted his subject, and he was exceedingly pleased at the practical manner in which the subject had been placed before them, for he expected to find him up in the clouds or down in the earth.

Mr. STONHAM said there were two or three matters in the address he should like to allude to. First, whether it was possible, as Dr. Monckton had referred to some persons being similar to monkeys, for mankind to degenerate into the monkey state. He was not a close reader of Darwin, but he dared say there could be retrogression as well as progression; he hoped it was not a fact. Another thing he should like to mention was that they read that the Israelites were a chosen race, and

he never yet saw one of that race digging hops, neither had he ever seen a Quaker hard-worked. He could not agree entirely with Dr. Monckton as to the minutiae of the management of farm labourers that was enjoined upon them. In the first place he thought that everything paid to the labourer should be paid in the shape of money; for if they paid part in coal, wood, &c., after a while he received it as a matter of course, and it was not reckoned as any money value whatever. Then with regard to giving the farm labourer manure with which to manure his garden, he considered the refuse from every cottage quite sufficient for all purposes. Another thing he disagreed with was giving the farm labourer too much garden. He found it did not work well. He thought it was quite sufficient that he should be allowed just enough to grow a few vegetables for his own use, because in nine times out of ten a man could earn more by working for his master overtime than by growing potatoes. He could not agree with Mr. Hayes' observations about the beershops, for he did not think his inference was logical, because it was legislated that the beershops should be open, and inasmuch as our laws are not like those of the Medes and Persians, he thought when the legislature had made a false step it was incumbent on them to retrieve their position as soon as possible. He maintained that if they wished to demoralise a village they had only to establish a beer-shop and two gamekeepers, and they would do it effectually.

Mr. W. FANCETT, in reference to the lecturer's allusions to education, said he quite agreed with him that education must come as a matter of fact, and therefore they had better accept it, as had been suggested; but he for one did not think there was any cause for fear. He thought the education their boys were receiving in the National Schools—plain reading, writing, and arithmetic—was necessary, and it was incumbent and the bounden duty of the country to supply it all over the land. He argued that it was necessary for their own prosperity. As the doctor had very forcibly put it, if an intelligent master wished to impart his intelligence to a man, that man must have a certain amount of intelligence to receive it. As to what Mr. Chittenden had said about the sharp lad going away and leaving his less sharp brother behind, he maintained that as education progressed they would have them much upon the same level. They had only to look to Scotland for an example in that matter. There the people were much better educated than here, and if an intelligent master there bought a book, cleverly written, say upon the management of sheep, he could say to his man, "now take it, and go away and read it for yourself," and the man would go away and sit down with his watch dog and thoroughly understand the information which it gave. If they thus raised their population to one level, which would come in a short time, he thought they would have nothing to fear, but they might congratulate themselves that they had got a fair standard of education.

Mr. BARLING said the question affecting the agricultural labourer was now an opportune one for discussion, and was one of great importance, when viewed in connection with the new ideas that were so prominently brought before the public in connection with the labour agitation. He said they were new ideas because they had seen, under the influence, perhaps, of temporary prosperity of the labouring classes, a strong desire expressed, and in fact not only expressed but in a great measure carried out among those classes, to reduce the hours of labour, and at the same time to take the same if not a larger measure of pay, and many were believing that it was quite possible for the agricultural labourer also to receive a larger measure of pay even if he submitted to work the same number of hours. Many writers, at any rate local writers, had led the unthinking to imagine that it was possible that employers could afford to pay at a higher rate than they were now doing. They made a comparison between the wages earned by what was termed the skilled labourer and what was earned by the agricultural labourer; they compared 15s. with 35s. or £2 5s., and going on with the connection they inferred that the man was just so much the more miserable as he had the less money. He held that to be an entire mistake. It was possible for a man with a very low rate of pay, under circumstances, as stated by Dr. Monckton, to be quite as comfortable as a man who was earning more money, for there were many of the latter class who never appeared a bit the better off, but were more extravagant and less careful, and he was going to say some of the worst members of society, in proportion to their earnings. It did

not follow as a necessity, but it was really so. With regard to the absurd notion that by paying higher wages the value of the article produced would be according to the labour that was occupied in producing it. They must sell their wheat at a certain price, for they had to meet in competition not only their own countrymen, but with all the producers that could reach our market. The establishment of steam ships and railways had brought a larger area of supply, and they had to compete with countries where labour was naturally cheaper. It was naturally cheaper from this cause, that the population was larger in proportion to the country or district, as the case might be. In Prussia frequently the earnings of men were not more than 1s. 2d. per day, and of women—who work at labour which we should call hard work for men, for a woman often carried a hod—4d. per day. The price at which they would offer the goods in this market was the measure of the price the English producers could obtain, and they must measure the rate of wages by what they got for their productions, and not by what they desired to give. He took exception to Dr. Monckton when he said that the agricultural labourer was the residuum of the labouring community in this country. He totally differed from him. He believed there was as much true manhood—there was as much grandeur of character, and as much capability amongst the general agricultural population of this part of England at least as there was among any class, skilled or otherwise, and that he was by no means the residue. The allusions that the sharp boys left for the towns would lead one to suppose that all the sharp boys left; but that was by no means a fact. He had had a great deal of experience amongst agricultural labourers, and he had found that they possessed a great deal more intelligence than the general world gave them credit for, although they worked at the very base of the labouring arena. They were at the bottom, and it must be so of necessity. If they took the statistics of Europe they would find that by far the larger proportion of the labour was absorbed in producing food. The number being so enormous, of course they had to compete with each other for the price of the product they turned out, and those whose labour was the least good, of course would receive the lowest wages. The labour question must not be considered in the way that it had been considered by many, who had written apparently, not with the honest object of benefiting the labourer, but rather with the dishonest object of gaining the applause of the labourer by misleading him. There was much still to be done; much had been done. Those who could remember forty years must inevitably conclude that the agricultural labourer and every other class of labouring society had greatly advanced. He stated that he had the pleasure of being in London on Tuesday, but expressed his regret that twenty or thirty of the real working classes should not have been invited to the Cathedral to take part in the Thanksgiving, stating that he should like to have seen them there in their gaberdrines, and their wives in their old-fashioned shawls, and he might almost say coal-scuttle bonnets; for he held that the skilled artisans were not fair representatives of the working class, and that they were far out-numbered by the agricultural population. With regard to what had been said about the Quakers never doing any hard work, he was educated a Quaker, and had worked as hard as any agricultural labourer had worked, and as hard as Mr. Stonham had worked. He was proud to say that he had worked; he held work to be a noble occupation—it was one he hoped to die in performing. He had no feeling at all of shame at having worked, and would continue to work. He did not know that he had any other remark to make, except it was on the subject of education. It was pressed upon society by the carrying out of the new law, and he thought it would tend to the general welfare. He believed the result of putting in force the new Elementary Education Act would be a thorough blessing to the employer as well as to the labourer. There had been a prejudice against the educated labourer, because the labourer became a little proud of his special ability; and that had caused him to be troublesome to his master, as he had at idea of getting up in the world—but when the whole became educated, they would find a different condition of things. The man had been proud because he had been an exceptional character, and had an advantage which others had not, and had thus been able to be independent and troublesome; but when they got all men educated, one man would not be able to say “I am better than my neighbour.” They

had no cause to fear as employers of labour, but everything to hope from the spread of education.

The CHAIRMAN said he rose to make an observation upon a subject that had seemed to have been missed—that was, living in the neighbourhood of large towns like Maidstone, the difficulty they experienced in getting agricultural labour. Close around the town of Maidstone there was more competition for labour than there was amongst a good many of their friends who lived away from the town. Here they had the manufactories to compete with; they had also a class of labourers who did not seem inclined to accept a permanent situation, but they would go away to the brickfields, to the Isle of Sheppey harvesting, where they got higher wages, and perhaps spent their money before they got home on Saturday-night. How was it? He had so many labourers at work during the winter, but it was a simple fact they would not stay at home during the summer if they could earn more anywhere else; but such must expect to be out of work in the winter, and he questioned whether it would not be worth their consideration to accept a permanent situation. The labourer was much improved during the last ten years, and they knew why he was improving. He knew perfectly well that the farmer would engage the best men, and therefore the best men engaged with the best masters.

Dr. MONCKTON, in reply, expressed his pleasure and satisfaction at the attention with which so large and intelligent a meeting had been good enough to hear him, at the interest they had taken in the matter, and at the very mild criticisms to which they had subjected his address; but not one really antagonistic assertion had been made. It was true one gentleman denied that beershops did all the mischief, and disapproved of repressive measures. He (Dr. M.) had never affirmed that they did do all the mischief; indeed, three-fourths of his address had been devoted to other griefs, that required other remedies. Neither had he hinted at repressive measures, first because their own rules forbade politics, and next because they did not harmonise with the leaning of his own mind. His suggestion amounted to this—that when an ample supply of beerhouses already existed in a neighbourhood, it was morally suicidal to sign, from mere weakness and good-nature, such requisitions as led to the licensing of mischievous additions to the list. Mr. Stonham, in his usually facetious and forcible way, had alluded to Darwin, wondering whether development might not be backwards as well as forwards. He begged to say that he had rightly judged: degeneration was quite as possible as progression: the eight-pound hare of one country would soon produce a progeny of four-pounders in a barren and starvation district, and the best pigs of Mr. Fisher Hobbs would, if turned wild into the New Forest, be in ten years represented by very primitive and rainbow-backed descendants. Mr. Stonham had also taken exception to the payment of labourers in kind, and most rightly so. Heaven forbid that the British farmer should open a tally-shop! What he had suggested was that masters should take a friendly interest in the welfare of their people, helping them in their purchases if they were willing to allow them to do so, so that goods might be bought at a cheaper rate, and the carriage given for nothing. With regard to manure for gardens, he had perhaps forgotten for the moment that each cottager ought to find a supply by care and economy at home, but he considered this would be barely sufficient, and the annual gift he had suggested might, perhaps, do away with the temptation to each labourer to make a guano bag of his jacket pocket. The size of the gardens would depend, he thought, on the nature of the country; some land was so indifferent that the use of it, even rent free, was no boon, and much smaller allotments would suffice in hop countries, where so much work was done by the grate. The reduction of hours of labour, without altering the pay, and matters of trades unions and strikes he considered wholly out of place in connection with agriculture. Bad weather and the darkness of winter shortened the hours more than enough through about half the year. In these matters agriculture could not be compared with commercial enterprise. Rightly or wrongly, the Unionist or ticket man went to his master and said, “After such a date we must have so many shillings a week more, or we will strike if you do not give it us. We give you this notice that you may make all future contracts accordingly,” and so it might be supposed that the extra wages became diffused over society.

This would not apply to the agriculturist, who had an open market to compete with, who could not raise the price of his commodities, and had no resource from which to recompense himself for the enforced addition to the cost of his goods. Again, exception had been taken to his use of the word residuum; he had distinctly guarded that term from offensive interpretation, and therefore must have been misunderstood. The word was correct enough, meaning that which was left. In quartz crushing the earthy matter was washed away, and the gold itself became the residuum. He should be sorry indeed to have said one word in depreciation of the farm labourer, and would far rather promote in his hearers the feeling of respect, and even of affectionate regard, for these humble friends, that lengthened intercourse had often won from himself. The term skilled labourers had been employed and dwelt upon; and at present the distinction was just, but he hoped would soon cease to be so; in fact, the change from mere mechanical toil to skilled workmanship is in our districts, at least,

already much advanced; time alone will certainly complete it. The same with education; all the villages in the county were studded with schools, and the new law, very justly eulogised by one of the speakers, had only methodised and supplemented a work already well upon its way. In Maidstone 30 years ago 200 children were taught daily in the public schools; at present the number must exceed 2,000. In justice to what had been freely accomplished let each man look at his own parish and also remember that very often these legislative spurs simply or principally goaded the very sides that were reeking from work already done.

The CHAIRMAN proposed a vote of thanks to Dr. Monckton, to which that gentleman replied, taking gladly the opportunity to correct a mistake, though one on the right side. Mr. Clifford, an excellent authority, had just informed him that more than 3,000 children were now attending the public schools in Maidstone.

The proceedings then terminated.

THE STRIKE IN WARWICKSHIRE.

At Willesbourne and the surrounding district two hundred agricultural labourers have struck, the employers having declined to accede to higher wages and shorter hours. The Warwickshire Labourers' Union will support the men on strike until the masters concede their terms. Then a strike is to commence in another district, until it is extended throughout the entire county. This course has been decided upon because the union was only recently formed, and has not sufficient funds to maintain a general simultaneous strike.

At Bishops Cleeve, J. Arch, of Barford, said at Binton the farmers were raising the wages 1s., to prevent the men joining the union; but on Friday ninety joined. He knew farmers who were making money, although paying £10 an acre as rent; how much more profit did they get out of the land who only paid £2 an acre? Consequently the farmers could afford a more adequate remuneration for labour. The members at the Wellesbourne Branch had struck that day for 16s., ten hours a day, leaving work at three on Saturday, and 4d. overtime. Sir Charles Mordaunt, Mr. Spencer Lucey, and others had declined to accede to these terms; consequently the farms in Walton, Charlecote, Moreton, Gaydon, Wellesbourne, and Loxley were, to a great extent, without labourers. In South Warwickshire the pick of the labourers had joined the Union, a thousand in number, and not one of them would go to work for any one where there was a strike. He made a call for £50 or £60, to support the Wellesbourne men this week, as they had thought well to pioneer the way for a general rise. He had no doubt that if the strike was supported for a few weeks the employers would accede to the demand. He thought they should not make a general strike at present, 200 men were a sufficient number for the funds to bear at present. A code of rules was submitted to the meeting, and approved, for the management of a county union. The rules fix the wages for efficient labourers at 18s., but allow the men to take less, except in cases of strike. Ten hours are the maximum hours of a day's work, and four o'clock on Saturday the latest hour to end the week's work; all further labour to be paid 4d. an hour. Members are to be maintained on strike, and in sickness, and other adversity; they may also be assisted to emigrate. All strikes are to be managed by a board of directors composed of one representative from each branch of fifty members. Each branch manages its own affairs, but the board takes charge of the funds and regulates the movements of the society. The Friendly Societies and Trades Union Acts are taken advantage of, and every member has a voice in the election and constitution of the board, who are to submit full reports to annual general meeting. These rules are to be considered at a county gathering before being certified.

A meeting of landowners and tenant-farmers was held at the King's Head, Wellesbourne, to confer as to the best steps to be taken with reference to the strike. Sir

Charles Mordaunt, Bart., presided, and there were upwards of a hundred others present. A discussion of a conversational character took place, which elicited a general feeling of dislike of the union, and an agreement among the farmers to discountenance any attempt to organise a counter union among employers of labour. At the same time it was distinctly understood that everyone was to resist the demands of the men as much as possible. The Rev. Mr. Holbeech spoke at great length on the grave questions which had arisen, and finally submitted the following resolutions, which were unanimously adopted, and 2,000 copies ordered to be printed for circulation in the county: That this meeting most earnestly deprecates any combination amongst labourers which originates or fosters discord and disruption between the agricultural labourers and their employers. 2. That this meeting is most anxious to preserve intact the feeling of goodwill and confidence which have for the most part prevailed between the above classes. 3. That this meeting is firmly convinced that in the interest of the agricultural labourer every effort should be made to dissuade labourers from joining any union against their employers, and to persuade them to withdraw if they have joined; and if these measures are unsuccessful, then, as a last resource, this meeting considers that employers must refuse to employ union men. 4. That this meeting considers the demands already made by the labourers are excessive, but declines to interfere in the matter of wages, and leaves such disputes to be arranged between the master and man.

A proposal has been set on foot for turning out the men on every farm in the county so as to prevent the possibility of those in work supporting those who are out. At Warwick market on Saturday this subject was discussed at considerable length by the farmers, who looked upon it with favour and approval. From the temper and tone of the opinions expressed it is probable a large meeting of farmers will be convened shortly, and the threat of a general lock-out carried into effect. In that case there will be from 2,000 to 3,000 labourers with their wives and families thrown out of employment, and, as the vast majority of these are without a shilling in the world, the strike must suddenly collapse. Meanwhile there is a vast amount of sympathy with the men, and pecuniary relief is being raised for them in Leamington, Warwick, Stratford, and other places. On Saturday morning the secretary to the union received the following significant note from Professor Beesley: University Hall, Gordon-square, W.C., 15th March, 1872. Sir,—Having long taken an interest in labour questions, I am glad to see that the agricultural labourers are at length moving to better their position. If you will let me know the name and address of your treasurer I will send him a small subscription to your strike fund. Perhaps I may be useful also in other ways. Yours faithfully, E. S. Beesley, Professor in University College, London.

A meeting of agricultural labourers was held in an open space in the centre of the village of Radford, in order to consider the best means of obtaining an increase of wages and shorter hours of work. Mr. Russell was voted to the chair.

Mr. ARCH said he had heard that the landlords could bring men from Scotland, and that they would sacrifice any amount of money in order to gain their ends. Now he would ask them to throw a little reason into the question; imagine for one moment a mechanic taking a bill to a gentleman of £15, and the gentleman said he should only pay £14, "Oh! but," the mechanic would say, "you shall." So the agricultural labourer said to his, "My bill this week is 16s.;" but says the employer, "I shan't pay it, because I will gain my ends." He would ask them where was the difference between the two. The £15 bill would be admitted a just charge, and so he maintained was the 16s. bill, and ought every bit as much to be paid, and the utterance of "to gain their ends" was not fit for the British soil. England was no place for slavery in any form. If the working men, the agricultural labourers, would be free from their slavish trammels, they must themselves strike the blow in a peaceful way, and remember their purpose was honest and righteous.

The CHAIRMAN said that an M.P. had taken up the cause, and was backing up the poor people in their great movement, and they meant to invite him to come to assist them. Mr. Arch had done them great and signal service; and the movement was not only in Warwickshire, but throughout England.

Mr. TAYLOR said the lowest rate of wages ought to be 16s. per week. Could they save money on that? If they tried it they would find they would have to pinch and live very hard, and risk ill health. He would ask them to judge for themselves. He was sorry that such a degraded state of things existed as was exhibited by Lord Denbigh taking the chair at a meeting of working men. His very presence was a coercion of their feelings. He agreed with him that there was many a worse thing than rice, but if they had much physical work they must have some beef-steak. If they had rice alone they would find themselves soon below the mark of health. To think that a man could exist and subsist upon rice, Lord Denbigh did not know anything at all about it. If the noble lord had to work upon rice he would pretty soon say "Bring me a beef-steak with it." There was something wrong in all that. The Dissenting Ministers had joined in their cause, and with God's blessings he hoped and believed in their success.

Mr. GEORGE BARRY stated that the average wages in that district were from 10s. to 12s. a-week, and he knew one man who worked for 8s.; and he did not know how they could find bread and meat on that. He believed that they had been down-trodden upon, but that if they were true to themselves they would soon have their rights. He did not like the name of master, but thought they should rather call them their employers. Their time ought to be from 6 till 5 o'clock, and till 3 o'clock on Saturday, and their wages 16s. a-week, and it would be secured when each of them had joined the Union; and if their masters said they would discharge them, they should not mind that, but keep true to themselves, and they must gain their rights.

Mr. JOHN SHEFFIELD said he had to tell them that there was one of their fellow-labourers of that parish who had notice to quit his employer, and to leave his cottage because he had joined the Union (Voices: "Shame, shame, disgraceful!"). And he would like to know how long he had been there (A Voice: "18 years"). He understood that James Ward, who was discharged, was born in the place; and they might be opposed, but it would be of no avail if they were true to the Union. He wished that that hard-fisted man who gave that poor man notice had taken example by Squire Lucy's doings. Squire Lucy had told his tenants that he would not have one of the labourers disturbed (Three hearty cheers were given for Squire Lucy).

A lot of hands were held up, and the Chairman said that there were about 500 ready to join the Union.

The CHAIRMAN remarked upon the doings of the farm-labourers in Herefordshire and Gloucestershire. Copies of the rules of the Union would soon be printed, and they could have them on application to him. Union-cards would set the matter in a much better working order, and

were doing so every day. If they wanted some at Radford, they could have 40, 60, or 100, and the charge was 3d.

It was then decided that a Union of the agricultural labourers in the district should be formed, and that the entrance-fee should be 6d., their objects being to shorten their hours of labour; so that their time should be from 6 till 5 o'clock, and till 3 o'clock on Saturdays, with 16s. a-week wages, and to assist their fellow working-men when on strike. A large number of labourers were immediately enrolled as members of the Union.

MIDDLE TYSOE.—The unionists on strike at Wellesbourne made a demonstration on Tuesday, at Middle Tysoe, on the occasion of forming a branch society for the surrounding district, including Brailes, Shennington, and other parishes lying on the borders of Oxfordshire. Farm labourers attended from miles round, and there were also some farmers and tradesmen present. John Hancox was called upon to preside, and gave accounts of labourers who only received from 10s. to 12s. a week. He had known labourers go to work on very short commons, and children go to school with empty bellies, while many other children had been kept from school by want of decent clothing. While the Chairman was speaking, a farmer said he (the Chairman) received £1 a week, and Hancox explained that this was through his wife and child working in the fields—his wife had 1s. a day and his girl 6d. a day; but that did not improve his position as a labourer—it was a bad and unnatural system of making an income. Three cheers were given for the union as the best reply to the interrupting farmer. E. Haynes went to prove that good pay was more remunerative to the farmer than a grinding-down price. Quoting Scripture against oppression, he pleaded for Government control of the farming system in the interest of the nation, which was concerned in a better method of raising its breadstuffs. He expressed his confidence in a general rise of wages to the extent of 4s. in a week or two, through the operation of the union. George Clifton, of Brailes, said he had been a farm labourer for forty years, and though a teetotaler and industrious man he had not a sovereign of his own. Till a fortnight ago he never had more than 10s. a week. A shilling had been lately added to keep the men from the union. He had worked for his master thirty years, and last Saturday he was discharged for speaking in favour of the union. That was the persecution many were subject to in Warwickshire. The same man told his shepherd he had intended to give him a sheep's head, and a frock for his child, but as he had joined the union they would go to a more deserving character. He counselled the men to remain honest, industrious, and respectful, though "put upon" in this way, because victory was at hand. Mr. Arch announced that about 1,500 men had now joined the union, and that all the trade-unions in the country were being appealed to in support of the movement, which was receiving assistance on every hand. Several unions had already sent in money, and he acknowledged many private subscriptions. A gentleman from Texas, and one or two societies in London, communicated their readiness to give free shipment to all on strike, if they wished to emigrate to the colonies. At the close, a number of men joined the union.

On Tuesday morning a number of agricultural labourers now on strike in the Wellesbourne and Walton district marched into Kineton, being preceded by a brass band. Each man displayed a piece of blue ribbon. A good many elderly men figured in the procession. Beyond the parading of the streets, nothing further took place; but it was said that a lecturer would attend on Friday. We do not hear of any Kineton men having at present joined the Labourers' Union. After leaving Kineton, on Tuesday, the processionists visited Radway, Tysoe, and Eatonton.

FENNY COMPTON.—On Wednesday night, nearly a thousand farm labourers from Avon Dassett, Claydon, Knightcot, Northend, Farnborough, Wormleighton, &c., met on the school green, in the village of Fenny Compton, to establish a branch of the above union. Mr. James Knight, jun., was called to the chair. Mr. Hugh Chater (Fenny Compton) gave his experience of the hardships of the labourer owing to his inadequate pay. Their fare was the coarsest and poorest, their children were often in rags, and their homes comfortless; and how could it possibly be otherwise on 12s. a week? They rarely, if ever got a bit of butchers' meat unless a beast met with an accident, and was sold at 3d. a pound. He contended

that it was as much the master's interest and duty to consider the well-being of his men as it was the duty and interest of the men to be faithful and honest to their master; but at present time the relationship between the farmer and his men was unsound, un-Christian, and most unsatisfactory in every way. All classes, and especially the tradesmen, were interested in this movement for a rise of wages. If the men got 4s. a week more, making 16s., business would flourish at the shops, the poor rates would go down, and crime and immorality would be lessened greatly. Mr. J. Haynes (Ratley) said the labourers were considered hardy, stalwart men, but the meeting knew very well that, although they had to "rough it" their constitutions were enfeebled by poverty, and if they had better food they could do a better day's work. There had been a meeting of farmers that day at Wellesbourne, Sir Charles Mordaunt chairman, and they had passed resolutions, one of which was that the men should not join the union, but that disputes should be settled by the masters. The Rev. Mr. Holbech had put out a notice containing the resolutions, signed by Sir Charles Mordaunt, and had appended to it a request that his parishioners would not attend these seditious and wicked gatherings. Labouring men were not to be hoodwinked any longer, thanks to the cheap press; they were determined to have a moral and social revolution, and gain their rights as men entitled by their honest labour to the necessities and some of the comforts of life. Mr. E. Haynes (Ratley) said they had been too long like "dumb driven cattle;" they were resolved now not to be afraid to open their mouths and tell their grievances. If farmers could not afford to pay what their men must have to live decently, let the farms be let in allotments, and the men would soon show the world what a capital profit they could make out of the land. But it was said that would make them "too independent." He thought the country at large would be benefited by some independence, for they would be much better citizens, and get a voice in the Legislature. Mr. John Green (Wormleighton) went into figures to show the utter inadequacy of 12s. a week to keep a family, and he argued that if the farmer gave 18s. or £1 a week to his men, he would more than get it back in the higher price of his stock through increased consumption caused thereby. There were about 100 inhabitants to every square mile of land in Great Britain, and 640 acres to every square mile; consequently there were six acres and four chains of land for every man, woman, and child in the country. If he could rent the quantity which would fall to his lot as a family man, he could be a gentleman and keep his gig. Mr. J. Durham, of Mollington, advocated co-operative farming. The rules of the union were unanimously adopted, and cheers given for the speakers and the cause. At the close over sixty men joined the society and paid their entrance money.

LABOURERS' MEETING AT SHREWSBURY.

A district meeting of the North Hereford, South Salop, and West of England Agricultural Labourers' Improvement Society was held in the large room at the Raven Hotel, Shrewsbury. The meeting was called to afford the labourers an opportunity of discussing their grievances, and to hear an address upon the subject from Mr. A. H. Brown, M.P. for Wenlock, who was expected to take the chair. There was a large attendance, the room being almost full.

Mr. STRANGE said it was with great regret that night that he had to announce to them that Mr. Brown was unfortunately unable to be present, on account of a misunderstanding as to the time.

A working man then proposed that Mr. Morris, of Swindon, take the chair; Mr. Strange seconded it, and the motion was carried.

The CHAIRMAN said he was not there that evening to persuade them to strike. When strikes were resorted to they brought ruin upon those that resorted to them. Had it not been for the simple fact that that ill-advised step had been taken in some of the adjoining counties, he thought it very probable that he should not have come so far from home as to have attended a meeting in this part of the country.

Mr. STRANGE said last Saturday a meeting was held in Shrewsbury, and he was glad to see that the masters had spoken of the men almost in affectionate terms. He thought

that augured a better state of things, and he trusted that that night they would emulate the example of their employers and speak, as their employers did of them, respectfully, temperately, and moderately.

WILLIAM WILLIAMS said he got 12s. per week. He had a wife and ten children, and his wife had been "bad" for three years. He had 17s. 6d. to pay for poor's rate, and 12s. 2½d. for improvement rate, every year, and he paid 3s. 6d. per week rent.

THOMAS HEYWARD said he earned 12s. per week. He had six in family. He had two or three pints of beer a day, and a drop of milk occasionally. He had to work on Sundays, as well as week days, for the same wages.

RICHARD JACKS said he had been a labourer to a farmer ever since he could walk; and he thought farmers could afford to pay 3s. a day now better than they could, forty years ago, pay 10d. a day. Since he had been a married man he had worked for 14d. a day. He did so for three years, and that wages then was worth more than 3s. is now.

THOMAS PUGH felt that labourers' wages ought to be on the rise. He worked seventeen hours every day, and seven days every week, and for 13s. a week, and if that was not a shame upon the farmers, he should like to know what was. He was to-night in this state of mind: if he could not have a rise of wages in this country, he would seek some other; and he felt in this state of mind, that he should start pretty soon.

The CHAIRMAN: What necessitates your working seventeen hours a day?

The SPEAKER: Feeding cattle.

The meeting terminated with a vote of thanks to the chairman and secretary, and three cheers for Mr. Barber, who had recently made some concessions to his men.

MEETING OF THE LABOURERS AT BISHOP'S CASTLE.

The labourers of Bishop's Castle and its neighbourhood have held a large district meeting, to discuss their condition, and how they might best improve it. The authorities thought it advisable to refuse the use of the Town Hall for the purpose of the meeting, and so the men were glad to avail themselves of the large malt-house at the Royal Oak, the use of which, gratuitously, was kindly proffered them by the proprietor. Mr. W. Morris, newspaper proprietor, of Swindon, Wilts, presided; and there were at least 500 labourers present, by all of whom the greatest interest in the proceedings appeared to be taken.

JOHN HUGHES said that for the last nineteen years he had been working as a farm labourer at about a mile from the town. For the last thirteen years he had been in the same employment, during which time he had received different wages—at one time 9s., and another 10s., and, for the last four years, 2s. per day; but, for this sum, he had the more responsible post of farm bailiff. Being, however, in receipt of 2s. per day, he had not so much cause for complaint as some of his fellow-workmen; still, he thought his wages, and the wages generally of farm servants, were "too small for the day;" and he believed that with a rise of wages, and the taking of their cottages direct from the landlord, they would be in a much better position. Would be glad to see the time come when every labourer should be receiving his half-a-crown a-day, so that each should be able to meet his payments when required.

In answer to Mr. King, a farmer from Birmingham, who attended the meeting for the purpose of hiring workmen, Hughes said he had a cottage and certain "privileges" in addition to his 2s. per day.

EDWARD EVANS had been working at Bishop's Castle for upwards of seven years, and the highest wages he had ever received were 2s. per day, out of which he had to pay rent. Had a wife and five children, and really, with such a poor pittance, he "could not get things to come to a point any way whatever." He had been calculating it up lately, and found that after paying his rent, and allowing three meals per day for each member of his family, the money he received left just a penny a-piece per meal throughout the week—to say nothing of firing, clothing, boots and shoes, and other necessities of life. As for schooling his children, that he was sorry to say was quite beyond his power.

In reply to Mr. Wright, a farmer from Walsall, who was present, like Mr. King, for the purpose of hiring men, WIL-

LIAM FRANCIS said that out of his 10s. per week he paid his master £1 for rent, but that when he paid that rent his master generally gave him something back—10s. or 15s., or £1. As far as the wages of the country went, he dare say he was as well off as any other labourer, though badly enough at the best.

There were a number of other speakers, and between sixty and seventy labourers of the district enrolled themselves as members of the society, while some few engagements for Walsall and Birmingham were entered into.

OXFORDSHIRE.

MOLLINGTON.—FORMATION OF A BRANCH OF THE WARWICKSHIRE UNION.—The agitation which has been going on for the last few weeks amongst the agricultural labourers of South Warwickshire has at length reached this county (Oxon), and the first meeting held to advocate the movement was at Mollington, when the labourers of that and the adjoining parishes met on the Green, and notwithstanding the weather, there was a good attendance. The proceedings began shortly after seven o'clock, and lasted until half-past nine. The night being somewhat dark, two carriage lamps were put into requisition to throw light upon the proceedings. The chair was taken by Mr. H. Taylor, Banbury, who said he was glad to see such a gathering, and he believed they were honest men come for an honest purpose. Other people combined to benefit themselves, and why should not the agricultural labourers? He said it was intended to form a branch of the Warwickshire Labourers' Union there that night, and he called upon Mr. Thomas Herbert (Warmington) to read the rules, which he did. The object of the association was to improve the social condition of the labourers by increasing their wages, and he said that was a good thing and was just what every man amongst them wanted. He hoped that if they joined the association they would never act the Judas, but be men of principle and men of honesty—(a Voice: "That's right"). The rules said that Sunday time should be paid for, so that the shepherds would see a brighter time. He should like to see more reverence for the Sabbath day amongst men who professed to be Christian men, and if they would have men to work on that day they should be paid for it. The association would make arrangements for the support of the men out on strike. That was a fine idea. They would know where to go and get a loaf. They were not going to run after the relieving officer to get "snarled" and growled at. They were going to see a better day. The association would also help men to emigrate, and he hoped that some of the young folks there would yet have farms of their own in lands where the tiller of the soil was better appreciated than in this country. The entrance fee to the association was 6d., and the subscription three-halfpence a week. Those who were smokers could well afford to pay that, and if they only exercised a little self-denial there was no saying what they would accomplish. There were a number of other speakers, and the meeting was altogether of a very determined character.

The Banbury Chamber of Agriculture has called a special meeting for next Tuesday to discuss the questions involved by the strike. The resolutions to be submitted agree with those adopted by the local landholders in pronouncing the demands of the labourers excessive and deprecating agitation in the villages. Their severity is redeemed, however, by a recommendation that a Labourers' Conference should be organised by the Chambers of Agriculture.

SHROPSHIRE CHAMBER OF AGRICULTURE.

THE LABOUR QUESTION.

A general meeting has been held at Shrewsbury, to discuss the present position of the agricultural labourer, his wages, and the method of engagement. Mr. Bowen Jones, the vice-president of the Chamber, filled the chair, and there was a large attendance.

Mr. W. BREWSTER said it had become all but useless for him to speak upon that question, as the system he advocated

was generally known as being that of one of the successful competitors at the "Royal" of last year. The system he adopted was to pay everything in coin and nothing in kind. He was quite certain that farmers could not come to any unanimous opinion as to the rate of wages to be paid to the men unless they dispensed entirely with payment in kind. That was a subject in which he had always taken very great interest, and he had always carried out the system he had named since he had commenced farming. One reason why he did so was that it had always been the rule to run agriculturists down for paying low wages, whereas he was convinced that if every agricultural labourer would take into consideration what he is paid in kind, as well as in coin, he would see that he stood in as good a position as others in the manufacturing districts. He had taken the trouble to write to a gentleman well known in Staffordshire and throughout that county, but he was not at liberty to make use of the gentleman's name. He (Mr. Brewster) could vouch, however, for the veracity of the statement which he was about to make. They heard of a master giving only 9s. per week wages, and it seemed very small, but it must be remembered that their perquisites would amount to another 9s. per week. The gentleman he had referred to paid his labourers 13s. per week, and the perquisites raised it to 18s. 3d. per week. Another gentleman informed him that he paid 14s. per week, and with the perquisites that would amount to 20s. 6d. per week. He could name the different perquisites given by his friends in Staffordshire. The first perquisite was a cottage and garden, £5 4s.; malt and hops, £1 16s.; harvest money, £1 5s.; beer at other times than during harvest, £2; spending money (to waggons, who were allowed 1s. per journey), £1; drawing of coal, and potato ground, £1 10s.; and task work during harvest, £1; amounting to 5s. 3d. per week, and, with 13s. wages, made 18s. 3d. per week. The other gentleman paid 14s. per week in cash. He also put the rent down at £5 4s.; and the other perquisites were—potato ground and manure, £2 6s.; drawing coals, £1; spending money, £1; extra wages in hay harvest, £1; extra wages in corn harvest, £3 4s.; and five scores of pork, at 10s. per score, £2 10s. The gentleman did not allow his waggons to keep a pig, but he gave them pork in lieu; and as he did not allow them to keep a pig, he gave them, also, manure. The salary and extras altogether amounted to over £1 per week.

Mr. DAVIES (Sugden): What is the size of the farm?

Mr. BREWSTER: One is about 300 acres, and the other over 400 acres.

Sir B. LEIGHTON, Bart., said what I wish to offer to the consideration of this meeting is a suggestion of how I believe from practical experience such a system of management can be applied beneficially to the economic management of farms and the settlement of wages; and I speak deliberately, and with a full knowledge of the boldness and responsibility of the assertion, when I say that I believe some such arrangement will be found to be the best ultimate solution of the agricultural wages question. Supposing every farmer who had cottages let with the farm, or held at his nomination, as is not unusual, were to have attached to some of them (say one or two at first, and gradually more if found suitable) a few acres of cow land, say three to five, into which cottages he might put his best labourers, holding out a hope to others that if they saved money and stayed with him they also had the prospect of obtaining one of those cottages, the result would be, according to my experience, that he would have the pick of the neighbourhood for his men, and that he would have no further trouble with them on the score of wages; he might, in fact, be giving less than his neighbours for better workmen. The condition of holding these places should be the same as that which now obtains in holding the cottages, namely, three months' notice to quit, if they ceased to work for the farmer; but a still more important condition will be that the labourer shall have saved money, say £15 or £20, which any thrifty single man can save before marrying, and the habits of economy and thrift thereby formed will not only elevate the man, but will prevent his being afterwards ruined, by the occasional loss of a cow. The direct gain to the labourer, at little or no loss to the farmer, will be several shillings per week, obtained by the labour of his wife; but the indirect effect in inducing others to look forward to obtaining these places will be still more important. Some such tenements are generally to be found on most estates; but where such

are not available, I believe it would be worth the while of a large farmer, with the consent of his landlord, to take a small field, or a portion of one, out of his farm, at the cost of a very few pounds for fencing and a rough cow-house, which he might even consider, if he chose, in supplementation of wages, though the labourer would pay a full rent for it; he should be careful, however, that it is only grass land, which requires little or no labour except for a week at hay harvest. This will generally occur at a later time than the farmer's harvest, and my experience is that it would be worth the man's while to pay for cutting his patch of hay, rather than incur the danger of losing his place by leaving his work when the farmer required him.

Mr. PAYNE should like to say a word as to what Sir Baldwin had said as to the keeping of cows. Some years ago he was fortunate enough to travel in the North of England with Mr. Newill, Lord Powis's agent, and that gentleman took particular notes upon the subject. It was customary in that part of the country for the tenant to have ten or a dozen cottages immediately adjoining his farm-yard. These cottages consisted mainly of a room, in which there was a bed, which was shut off in the day time. For these cottages the labourers were not supposed to pay much rent, and it was the custom upon some farms that the labourer should have a cow, which was allowed to run with the farmer's cows. But when they came to make inquiries they did not receive much in cash, the wages being £4 or £6 a-year, with so much peas, oatmeal, &c. He was not quite clear as to the keeping of a pig—he did not think the keeping of a pig was allowed. They saw that when the keep of a cow was allowed, the wages were very low. If a man was to have 12s. per week and the keep of a cow, he (Mr. Payne) did not know who was to keep it for him, or who was to pay the rent.

Mr. T. GOUGH agreed with Mr. Brewster that perquisites should be done away with. To give the keep of a cow would only be to increase those perquisites.

Mr. J. BOWEN JONES said: Let us then briefly consider the position of the agricultural labourer. His time of working: Including the longer hours of harvest, he nominally works about ten hours a day. Three months (winter) 8 hours; 1 month (harvest) 12 hours; 3 months, 10½ hours. But practically farmers do not get so much as this time, because the position of a farm renders it impossible for a labourer to be rigidly at work at the striking of the clock, nor has he the check to prevent him ceasing his labour before the hand points to the hour of leaving off when in a similar position; and a considerable portion of his time is consequently taken up by moving about from one place to another. Independently of this, more especially in winter, I know of no farmers who do not find sheltered work in weather that is unfit for out-door labour, and many hours are thus lost to the employer by change of work that is often of but little utility to him. These facts fairly considered, I think we may say, without fear of contradiction, that agriculturists do not get ten hours a day per year round, harvest included, which period, notwithstanding the higher wages paid, I have always considered the cheapest labour-paying season, both under the day-work system, supplemented with meat and beer, where work is rapidly pushed on—a system that I deprecate—and under the piece-work plan which I have adopted, where a mutual interest has been established, and which I think has worked advantageously not only to the men but to the employer. Compare the labour of men employed in factories or large works in towns. They are marshalled in sheds or yards, with their time-keepers over them, from the hour of commencing to that of leaving off, and work is rigidly enforced, which for the most part is of a more laborious character than that of farm-work. I won't take up the time of the Chamber by a comparison of the agricultural labourer of the present day and the same man twenty-five years ago; suffice it to say, and I am only too grateful to see it, that step by step with the introduction and improvement of machinery he has made corresponding advancement, and not only has his wages increased from thirty to forty per cent., but his work has diminished in inverse ratio; and instead of the decrepit broken-down man that was at that period often found at the age of forty, we now find men in the full vigour of manhood and brain, and method or system has been and is taking the place of muscle-and-bone hard labour; and though of course manual labour can never be entirely dispensed with, if labourers will continue to employ their minds, and also

honestly exert themselves, I doubt not that they will gradually increase the value of their work without enhancing its cost to their employers; but no greater fallacy can exist than to suppose that this result can be brought about by a demand for a considerably higher rate of wages than farmers can afford to pay, without any attempt to return the money's worth to the employer. The effect of this course of action in our country has at the present moment given rise to a feeling of dissatisfaction that only exists in a great many cases from want of thought on the part of the men, and let us be charitable and say want of knowledge on the part of those who have agitated for them; but I believe it will have one good result, and be the death-blow to the system of meat-and-drink perquisites that have hitherto too generally been the means of paying for extra labour, and which have been as reluctantly given up by the labourers who have been hitherto liked by, I think I may venture to say, the majority of farmers themselves. This system has crept in from olden days as a substitute for money payment, for extra hard work, and overtime; and whatever the labourer himself has gained where he has had meat given him, as a rule, has been to the loss of his family, and where large quantities of beer are given to stimulate workmen in the harvest it has proved not only to the disadvantage of the family, but to the injury of the man himself. The adjustment of meat and drink perquisites in money enables men to lay out exactly what they feel they want themselves for their work, and instead of taking in harvest as much as seven or eight quarts of beer a day—a thing by no means uncommon in this county when given to supplement wages—they will be content to take a moderate quantity, and that regulated by each individual according to his own requirements. Able-bodied farm labourers who really wish to earn good wages should look to piecework as their opportunity, and in my humble opinion this is the medium by which we, as farmers, should endeavour to improve our labourers' position. The effect of an agitation like the present for 2s. 6d. a day all round cannot be granted by farmers in this county in addition to the many other advantages a country labourer possesses, but I think this sum may be more than obtained under the piece-work system where the labour of farms is kept up to its proper strength, and employed in improvements and superior cultivation at those times of the year when work is scarcer; and not only do I feel sure that this will be the case, but that it will ensue without any interference with those other advantages that the position of the farm labourer renders it difficult to compute by a money payment. I discussed this labour question with some of my neighbours a fortnight ago, and we decided, as some articles have increased in value (although flour and pork are cheap enough, and cheese and tubbed butter are not particularly extravagant), to advance able-bodied labourers 1s. per week from the Lady-day settling; and we went into an estimate of some of the payments we were making in perquisites which we arranged to reconsider before the advance was made, and endeavour to compute at a fair money value, with a view to adopt the money payment almost in *toto* . I say almost because there are a few old and faithful servants on most farms whose prejudices are against alterations, and whose wishes deserve consideration. Those who are earnest in their demand for a higher rate of wages will, by such means as this, be met; but if the cry of 2s. 6d. per day is looked for in the way of demanding, on its being granted 3s. 6d. and so on, the result will be requirements that the position of farming is unable to fulfil; if conceded at a pinch, it will be negatived by those employed being knocked off on days they are not wanted—in rainy weather, in short days in winter; and that the links that bind and feelings that exist between employer and employed will be rudely shaken, I conscientiously believe, to the disadvantage of the two; that timekeepers would be wanted, the hour or quarter system of necessity being introduced; and that the men would find this brought about would not be to their advantage. Therefore I desire much to see the introduction of the co-operative system as far as it is possible to do so in the piece-work plan, both with regard to horse as well as manual labour; in part payment by results with stock men, such as an allowance per head on lambs reared to weaning time, or by any better method that can be suggested. Further than this I don't think co-operation in agriculture can be successfully carried out. The labourers, having no capital,

would fail to be able to take part in such losses as farmers have experienced during the three years ending last Lady-day. Our meeting to-day was called with a view of stating as fairly as possible the position of the labourer, and not with any intention of passing specific resolutions. It does not partake of the nature of a counter combination, and I trust and doubt not any such course of action will be unnecessary, for, as a rule, farm labourers are a reflecting class, and will weigh matters more accurately than many of their kid-gloved agitators have any idea of, and it is only the few and clamorous who will be led away by them, and take an illegal and unscrupulous advantage of their employers at critical periods, as has already been evinced in one case brought before the magistrates in this county, and which has been followed exceptionally by a few others. I have advocated abolition of perquisites, but I should not like to be misunderstood with regard to this. Without the radical changes I have shadowed out, perquisites, of necessity, must continue to some extent. How could a labourer do without the cartage of his coal except at the disadvantage of getting it at the nearest and dearest place, and then having to pay a heavy rate for carriage? How could he get his wood hauled, which, very often, is a gratuity, or bought at a nominal rate? What equivalent could you give him for gleaming, which is now usually reserved to the workmen's wives on a farm, except where they sometimes prefer in a locality visiting each of their neighbours, probably for a little gossip as well as work, and which amounts in value, in many cases, to over 1s. per week on their husband's wages. Again, how can cottages remain rented at nominal sums if labourers go for an entire money value for their work, and by which they are enabled now to save as much as 2s. per week in fruit and vegetables, and the difference in the town and country rent 2s. to 3s., as compared with a working man in town, besides having the benefit of pure air, a desideratum unobtainable by hundreds of artisans and their families. I have said nothing about the work that women and children may do to assist to make a living for a large family. I don't know much of it in my district, and am happy to state I believe my workmen can dispense with it. The average payments to women on my farms, between 600 and 700 acres, being about £3 a year to women, and generally one lad only of about 13, being employed. I disapprove, as a general rule, of the working of women to a great extent, but there are many exceptions where their employment may be advocated. Where they have large families their duties should lie at home. I have not gone into the question of cow land or allotment. The gardens in the district I reside in are large and good, and I expect sufficient to keep a man employed pretty much after working hours. This is, in my opinion, the quantity of land that is most serviceable to a working man, and from which in most cases he will derive greatest benefit. A few holdings of a larger size in an agricultural district may be advantageous as stepping stones to thrifty and industrious labourers, but as a rule it has been proved that very small farmers are worse off than farm labourers, as Mr. Charles Howard, in a paper he once read before the Farmers' Club, very aptly put it. They do twice the work of a labourer, and get about the same pay. I have two or three small farmers as labourers, and as they are only able to work for me about two thirds of their time I should require one-third more labourers if all my men were on the same terms. They have to cultivate and sow their land at a disadvantage, as of course they get me to lend them my team to do it, and that after my own is done generally; they cannot consequently get the returns that more perfect cultivation would ensure, and often are absent at the busiest times. If some arrangement to supply milk to our workmen could be made I believe it would be advantageous to those with families. There is some difficulty I know, because I remember hearing of a rector in a country parish giving a certain number of recipients milk every morning and evening, but they became so quarrelsome about the respective quantities each were to have that he discontinued the gift. If farmers would make a slight charge for it perhaps it would be the best plan, and then every family would have what he chose to buy. If by this suggestion I appear to lean back to the perquisite system it is only because in some districts labourers have no chance of getting this useful commodity except through the farmers. All other articles they can buy, and if the odious malt-tax was repealed I believe cottage brewing would be to some extent re-introduced, and a very great boon be conferred not

only on the agricultural labourer but upon the whole of the working population of the country. Before concluding I would remark that two very excellent addresses on the subject which we have been considering should be read by all who feel interested in this matter, the one by Mr. Clare Sewell Read, M.P., before the Farmers' Club last November, the other a paper to the last Journal of the Royal Agricultural Society of England by Mr. John Dent Dent, M.P. I trust this discussion may do good. That wages can be fixed by men or by masters is a fallacy, and contrary to all rules of political economy. Different districts possess their various requirements, and have their advantages and disadvantages, and the price of labour must and will be determined by the value of the work done. Look at our towns, for instance, where you can get labour of some sort from the dregs of the population for a nominal sum *pro tem.*, and where at the same time the skilful workman gets the highest remuneration. Supply and demand will regulate this matter, and the facilities offered by railway communication now enables the labourer to take his labour at its value to the best market, and I for one would blame him were he not to do so, provided it were done in a straightforward way. In my experience I have known several workmen who have tried what are termed the high wages counties, Northumberland and Cumberland, but in each instance they have returned to Shropshire, satisfied they could do no better. I trust that the irritation that has been raised in the working man's mind by the present agitation for an advance in wages (which in some respects and districts was at the present time to be looked for, and has been under the consideration of all farmers, I know, the last month) will be allayed by the arrangements made with their masters, and that they will endeavour to compensate them for any advance they may make, which up to the present time they can very ill afford to pay them. I have said nothing about benefit societies, clothing clubs, and similar institutions, because the latter are more or less to be looked upon as charities; but I don't think it unfair, in reviewing the position of the agricultural labourer as compared with the town labourer, to point out that these advantages are more within the reach of the former than the latter, as are also those personal attentions and kindness which a rural population experience in a marked degree more than an urban. I have not alluded to the unquestionable effort, often at great self-sacrifice, that has been made on the part of landowners the last few years to build new and improve existing cottages on their estates. These efforts are all in the direction of improving the lot of the agricultural labourer. Neither have I entered into the question of emigration as a means of raising the value of labour; but as this subject has been rather freely commented upon lately, I would observe that reliable estimates put the cost of living in America at £50, against £35 in England—so that in all sincerity I would say to working-men, before taking such a step, pause, or perhaps you may find yourselves worse off at the end of your journey than you were before you started.

Mr. STUKER asked if any gentleman present could inform him whether the new Masters and Servants Bill would be applicable to agriculturists and their workmen.

Colonel CORBETT, M.P., said so far as he could ascertain, it would not be applicable to them, but those only who came under the Workshops Acts. He should, however, watch the Act.

The meeting then broke up.

SHEEP ON TURNIPS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—Will you be kind enough to give an answer to a strong argument, which is as follows: Ten acres of turnips are fed off with sheep without leaving the field, or being supplied with any other food whatever. When the sheep have finished the field, are the ten acres impoverished or not by the feeding and growing of the same? I beg to sign myself, OVIS.

[By far the largest proportion of the fertilizing substances contained in the turnip crop, probably about $\frac{1}{2}$, is

returned to the land if the crop is consumed by the sheep on the field, and only about $\frac{1}{2}$ of the materials useful as manure is carried away by the sheep in the form of bone and the nitrogenous matters which enter into the composition of the animal organism. The bulk of the animal is produced from the sugar, pectin, vegetable fibre, and other non-nitrogenous constituents of turnips, and these constituents have no value as manuring agents. In my judgment the land is left in a better agricultural condition after the turnip crop has been consumed on the ground by sheep, and the latter been sold off, than it was before the turnip crop, for there is but little fertilizing matter carried away by the sheep, and the manuring elements in the turnip crop are deposited in the shape of sheep-dung and urine in a very uniform manner in the surface soil (where they are most wanted), and in a perfectly prepared and readily available state. If I am not mistaken, I think it will be found in practice that the land is more productive after the whole of the turnip crop has been consumed on the ground by sheep than before.—AUG. VOELCKER.]

THE BIRMINGHAM SHORTHORN SHOW AND SALE,

THURSDAY, MARCH 7, 1872.

BY MR. LYTALL.

The entries at this English rival of the great Dublin spring show fell from the 153 of last year to 106, but the judges, Messrs. Ladds of Ellington and Knowles of Wetherby, had some difficulty in arriving at their awards. There were 34 bulls in the yearling class, and about a score of these were taken out and finally drafted to half-a-dozen. After some consideration, Mr. Chas. Bayes's Quintus (29705) was placed at the front, and received the £50 prize. Of a good deep roan, he was at the uttermost but a fair, useful bull of fifteen months, even fleshed, but a trifle harsh in his hair. He was got by Captain Oliver's Satan (27430), a Sylph or Sweetheart bull, from Hebe, one of the old Bagshaw breed of Northamptonshire Shorthorns. At the sale afterwards, Mr. Hemming gave 74 gs. for him. The second prize of £15 was awarded to Messrs. Garne's Notary (29454), a yellow-tinged roan, three weeks younger, but larger than the first-prize bull, though apparently coarser, but of more substance. His sire and dam's sire were both bred by Mr. Jon. Peel. He fetched 60 gs., and went to Mr. Frost, of Chester. Lord Sudeley's Cherub 2nd, the third-prize bull, was rather more fancied by the public than the others, but it was impossible to overlook his upright but powerful shoulders, though they were no doubt compensated for by his fine, stylish character, and beautiful quality of hair and flesh, inheriting as he does the style of his sire, Colonel King-scote's Prince of Clarence (27163), with the substance of his dam, Booth's Seraphina. He sold for 53 gs. to Mr. Slater. A very useful bull of Mr. T. Harris, by the Sholebroke sire, Festival, was highly commended, and he fetched 55 gs. to Mr. Whitehouse. The commended yearlings were Mr. W. Faulkner's War Eagle (30255), a plain coloured, thick bull and the Rev. W. Sneyd's Walter 2nd. Messrs. Graham, Mr. E. Lythall, J. Pulley, T. Mace, and S. L. Horton were the other principal exhibitors in this class, but the majority of bulls were of an indifferent character, and low in condition. Two thin, but hairy, well-bred bulls of Messrs. Grahams' fetched 50 gs. each; and Mentor, a thick, short-legged bull of Messrs. Gurnes', made 53 gs. Mr. Charles Barnett sent a neat, but rather small roan, that made 37 gs.; and a deep red, vigorous bull of Mr. Bayes', Vampire (30,200), was bought for Lord Tredegar at 41 gs.

There were 37 bull-calves of mixed character and uneven condition, yet there was more competition for them than for the yearlings, and Mr. Robotham's King Rufus, a red, hairy calf, unnoticed by the judges, fetched 80 gs., the top price of the day. He was a son of Sir G. Philips' Lackey (24291), from a well-descended cow of Mr. T. Harris'. The first prize in this class was Mr. Horton's Cherry Prince, a large, roan, hairy calf, which went to Mr. Yates for 70 gs. Mr. John Thompson was called in to decide the second prize, and it eventually fell to Mr. Mace's Duke of York, a well-grown calf of good quality, which Mr. Evans purchased at 64 gs. Mr. Faulkner won the third prize with Wellington, grandson of the prize fat cow, Woman in White, rather a weakly but even calf, and short of hair, which sold for 43 gs. Mr. Hamer's Sir Lionel was highly commended (39 gs.), and Mr. B. H. Allen's Governor (43 gs.) commended. Three cows and two heifers made up all the female entries, and Mr. J. How won the £5 prize in each class. Mr. W. Woodward won the £5 two-year-old bull prize with Duke of Damsons (34 gs.)—six entries; and in the five old bulls, Mr. T. Walker's Friponnier (62 gs.) beat Mr. Graham's Earl (44 gs.), who was highly commended.

Some bulls entered as extra stock, but made no particular prices. There were not many absentees, and only four animals were passed without bids. The competition was languid for the yearlings, but revived when the calves came on, which were as a whole perhaps a better lot, and made altogether very respectable, and one would think, from the quality of the animals, highly satisfactory prices.

YEARLINGS.

Walter 2nd (30253), white, calved July 1st, 1870; by Garibaldi 5th (26232).—Mr. F. Lythall, 30 gs. *Commended*. King Lear (28973), red and white, calved July 7th, 1870; by Fitz Killerby (26166).—Mr. Welch, 21 gs. War Eagle (30255), red and white, calved July 10th, 1870; by Second Earl of Darlington (26056).—Mr. Cochran, 43 gs. *Commended*. Gainful, flecked roan, calved July 20th, 1870; by Festival, (26147).—Mr. Whitehouse, 55 gs. *Highly commended*. N.B. (29424), roan, calved Aug. 10th, 1870; by Royal Benedict (27348).—Mr. B. Checkley, 41 gs. Lord Hawke (29117), roan, calved Aug. 12th, 1870; by Fitz Killerby (26166).—Mr. Lees, 26 gs. Red Duke (29730), red, calved Sept. 3rd, 1870; by Thorndale Duke (27661).—Mr. Quick, 35 gs. Steinmetz, roan, calved Sept. 10th, 1870; by Earl (27624).—Mr. Martin, 39 gs. Lord Ernest, light roan, calved Oct. 1st, 1870; by Patrician (24728).—Mr. Morris, 31 gs. Stratton Oxford, roan, calved Oct. 14th, 1870; by Brockley Oxford (25688).—Mr. Attwater, 37 gs. Mentor (29358), roan, calved Oct. 14th, 1870; by Royal Benedict (27348).—Mr. Ricketts, 53 gs. The Eaton Butterfly (30133), red roan, calved November 1st, 1870; by Cherry Butterfly (23550).—Mr. Hiron, 31 gs. Cherub 2nd, roan, calved Nov. 2nd, 1870; by Prince of Clarence (27163).—Mr. Slater, 53 gs. *Third prize*. Cherry Butterfly 2nd (28169), red roan, calved Nov. 8th, 1870; by Cherry Butterfly (23550).—Mr. Harding, 25 gs. Roan Butterfly (29783), roan, calved Nov. 10th, 1870; by Cherry Butterfly (23550).—Lord Leigh, 30 gs. Fawlsley (28535), roan, calved Nov. 11th, 1870; by Fitz Killerby (26166).—Mr. Norman, 31 gs. Vampire (30200), red, calved Nov. 27th, 1870; by Satan (27430).—Lord Tredegar, 41 gs. Quintus (29705), roan, calved Dec. 4th, 1870; by Satan (27430).—Mr. Hemming, 74 gs. *First prize*. Young Benedict, red, calved December, 1870; by Royal Benedict (27348).—Mr. Hlawthorne, 36 gs. Notary (29454), roan, calved Dec. 28th, 1870; by Buccaneer (25693).—Mr. Frost, 60 gs. *Second prize*. Character, red, calved Jan. 13th, 1871; by The Earl (27624).—Mr. Cook, 27 gs. Lord of the Valley, rich roan, calved Jan. 20th, 1871; by Lord of the Manor (26714).—Mr. Greenway, 46 gs.

Fertile, rich roan, calved Jan. 22nd, 1871; by The Earl (27624).—Mr. Keck, 50 gs.
 Foggathorpe, light red and white, calved Feb. 2nd, 1871; by Prince Charming (27130).—Mr. Smith, 51 gs.
 Marquis, red, calved Feb. 11th, 1871; by Count Bickerstaffe 2nd (25833).—Mr. Heekin, 30 gs.
 Graf Renard, roan, calved Feb. 13th, 1871; by Grand Duke 9th (19879).—Mr. Corbett, 50 gs.
 Lord Charles 4th, roan, calved Feb. 20th, 1871; by Fitz Killerby (26166).—Earl Cawdor, 29 gs.
 Chorister, red and white, calved Feb. 21st, 1871; by Count Bickerstaffe 2nd (25833).—Lord Calthorpe, 36 gs.
 Dairy Duke, white, calved Feb. 22nd, 1871; by Prince Charming (27130).—Mr. Stratton, 29 gs.
 May Duke, roan, calved Feb. 22nd, 1871; by Fitz Killerby (26166).—Mr. Latham, 21 gs.
 Lord Marmion, roan, calved Feb. 23th, 1871; by Stanley (27560).—Mr. Dunn, 51 gs.

BULL CALVES.

Selwyn, white, calved March 18th, 1871; by Polar Bear.—Mr. Keam, 31 gs.
 Early Bud, roan, calved March 5th, 1871; by White Satin (27800).—Mr. Lawrence, 21 gs.
 White Butterfly, white, calved March 7th, 1871; by Cherry Butterfly (23550).—Mr. Barker, 31 gs.
 Sir Samuel Baker, roan, calved March 7th, 1871; by Stanley (27560).—Mr. Eardley, 30 gs.
 Lord Lavender 8th, roan, calved March 8th, 1871; by Cauley Duke (23506).—Mr. Checketts, 41 gs.
 Robin Adair, roan, calved March 9th, 1871; by Rob Roy (29806).—Mr. Hawkins, 43 gs.
 Magnet, roan, calved March 12th, 1871; by Cecil (25725).—Mr. Eatley, 33 gs.
 Cotherstone, roan, calved March 13th, 1871; by Cardinal (27612).—Mr. Wilkins, 26 gs.
 Albert Victor, white, calved March 15th, 1871; by White Satin (27800).—Mr. Dunn, 24 gs.
 Captain Bell, red and a little white, calved March 17th, 1871; by Cardinal (27612).—Mr. Winterton, 28 gs.
 Ventriquoist, roan, calved March 20th, 1871; by Cecil (25725).—Mr. Richards, 21 gs.
 Prince of the Lilacs, rich roan, calved March 22nd, 1871; by 5th Lord of the Lilacs (26712).—Mr. Beuon, 46 gs.
 Albion, light roan, calved March 26th, 1871; by Pantaloon (29518).—Lord Kesteven, 36 gs.
 Governor, roan, calved March 26th, 1871; by Catton (25721).—Mr. Grimes, 43 gs. *Commented.*
 Mineral, red, calved March 30th, 1871; by Ironmaster (28895).—Mr. Lowe, 33 gs.
 Coxcomb, roan, calved April 5th, 1871; by Lord Waterloo 2nd (26755).—Mr. Brown, 37 gs.
 Charley, roan, calved April 19th, 1871; by Cardinal (27612).—Mr. Reynolds, 25 gs.
 Lord York, roan, calved April 20th, 1871; by Lord Waterloo 2nd (26755).—Mr. Wilcott, 36 gs.
 Victor Emmanuel, roan, calved April 20th, 1871; by Oxford Barrington.—Mr. Walker, 26 gs.
 Duke of York, rich roan, calved April 20th, 1871; by Baron Wetherby 24th (27980).—Mr. Evans, 64 gs. *Second prize.*
 Albert Victor, red and a little white, calved May 1st, 1871; by Oxford Barrington.—Mr. Smythies, 26 gs.
 Sir William, roan, calved May 1st, 1871; by Sir Walter (27501).—Mr. Turberville, 30 gs.
 Edgcott, roan, calved May 1st, 1871; by Fitz Killerby (26166).—Mr. Smythies, 21 gs.
 Sir Lionel, red roan, calved May 2nd, 1871; by Monitor (24615).—Mr. Bibby, 39 gs. *Highly commended.*
 The Duke, roan, calved May 4th, 1871; by The Earl (27624).—Mr. Elkington, 32 gs.
 Cherry Prince, roan, calved May 6th, 1871; by Prince Charming (27130).—Mr. Yates, 70 gs. *First prize.*
 Cherry Butterfly 3rd, red roan, calved May 20th, 1871; by Cherry Butterfly (23550).—Mr. Singlehurst, 33 gs.
 Marrowlat, light roan, calved May 24th, 1871; by The Cardinal (27612).—Mr. Wilkison, 33 gs.
 Jerome, roan, calved May 25th, 1871; by The Earl (27624).—Mr. Burgess, 35 gs.
 Newton, red roan, calved May 30th, 1871; by Fitz Killerby (26166).—Mr. Inge, 32 gs.

Red Prince, red, calved June 24th, 1871; by Festival (26147).—Mr. Lea, 27 gs.
 King Rufus, red with a little white, calved July 7th, 1871; by Lackey (24291).—Mr. Mann, 80 gs.
 Weston Duke, rich roan, calved July 8th, 1871; by Fugleman (28660).—Mr. Harding, 14 gs.
 Wellington, roan, calved July 10th, 1871; by Athelstane (23331).—Mr. Wilson, 43 gs. *Third prize.*
 Cock Robin, roan, calved August 23rd, 1871; by Rob Roy (29806).—Mr. Potter, 36 gs.

COWS AND HEIFERS.

British Rose, white, calved January 10th, 1865; by British Hope (21324).—Mr. White, 40 gs. *Prize.*
 Songstress, rich roan, calved April 11th, 1866; by Protector (22660).—Mr. Attwater, 44 gs.
 Luxury, red and a little white, calved December 20th, 1867; by Heir of Windsor (26364).—Mr. Whitehouse, 30 gs.

TWO-YEAR-OLD HEIFERS.

Hinda 6th, red roan, calved March 6th, 1869; by Lord Lyon (24147).—Mr. White, 45 gs.
 Royal Rose, roan, calved October 15th, 1869; by King Charles (24240).—Mr. Attwater, 46 gs. *Prize.*

TWO-YEAR-OLD BULLS.

Duke of the Damsons, rich red and a little white, calved December 3rd, 1869; by Count Oxford (25548).—Mr. Dutton, 34 gs. *Prize.*
 Ironmaster, red roan, calved February 11th, 1870; by Adamant.—Mr. Marquis, 31 gs.
 Starlight (30060), roan, calved March 27th, 1870; by 2nd Earl of Gloucester (26063).—Mr. White, 35 gs.
 Weston Fugleman, rich roan, calved April 9th, 1870; by Fugleman (28660).—Mr. White, 32 gs.

ALL-AGED BULLS.

Adamant, roan, calved July 30th, 1867; by Potentate (22537).—Mr. Whitehouse, 41 gs.
 The Earl (27624), rich roan, calved January 12th, 1868; by Cesar (23499).—Mr. Graham, 44 gs.
 Fripponier (26208), red, with a little white, calved February 12th, 1868; by Duke of Darlington (21536).—Mr. Watson, 62 gs. *Prize.*
 Merrythought, white, calved April 13th, 1869; by Drummer (25919).—Mr. White, 38 gs.
 Baron Butterfly, (27920), red and a little white, calved May 20th, 1870; by King Charles (24240).—Mr. Robotham, 30 gs.

EXTRA STOCK.

H.H. Prince Duleep Singh (26397), white, calved April 14th, 1868; by Cesar (23499).—Mr. White, 40 gs.
 Nonconformist, rich red and a little white, calved November 21st, 1869; by Hengist (26368).—Mr. Barber, 29 gs.
 Noble Count, red roan, calved December 3rd, 1869; by Count Oxford, (25848).—Mr. Horton, 28 gs.
 Marmaduke (29280), white, calved April 3rd, 1870; by Archduke (25525).—Mr. Howman, 26 gs.
 Meadow King, rich red, calved June 24th, 1870; by Drummer (25919).—Mr. T. White, 28 gs.
 Red Duke, red, calved July 14th, 1870; by Archduke (25525).—Mr. Mander, 25 gs.
 Paragon, red and white, calved October 23rd, 1870; by Patrician (24728).—Mr. Godson, 29 gs.
 Forester, red and white, calved November 7th, 1870; by Norgrove (29447).—Mr. Tilsley, 32 gs.
 Lord Stuart, red, calved November 14th, 1870; by University (27693).—Mr. Buckley, 26 gs.
 Marquis, roan, calved December 11th, 1870; by Patrician (24728).—Mr. Hawkins, 31 gs.
 Lord Wharfdale, red and white, calved January 27th, 1871; by Archduke (25525).—Mr. Davis, 25 gs.
 Royal Oak, roan, calved March 7th, 1871; by Norgrove (29447).—Mr. Keck, 26 gs.
 Lord Lavender 6th, (29129), white, calved March 15th, 1870; by Canley Duke (23506).—Mr. Walton, 31 gs.
 Lord Lancaster, red and white, calved October 18th, 1871; by Lord Blithe (22126).—Mr. Harding, 10 gs.
 Prince John, red and white, calved November 24th, 1871; by Lord Blithe (22126).—Mr. Ind, 10 gs.

SALE OF LORD FITZHARDINGE'S SHORTHORNS,

AT BERKELEY CASTLE, ON MARCH 5TH, 1872.

BY MR. JOHN THORNTON.

This auction, although following the Birmingham Show, really opened the season of pure-bred stock sales. The Berkeley Castle herd of Shorthorns has now been established several years from animals of the fashionable Bates blood. Every spring a number of young bulls, as well as a few cows and heifers, are dispersed by auction at the Castle Farm for the benefit of the tenantry and improvement of the stock abounding in the luxuriant vale. The first sale took place in 1870, and resulted in an average of £30 16s. 9d.; last year, notwithstanding one of the wettest days in the season, thirty-three head reached £33 18s. apiece; and this spring, under the more favourable influence of a bright but showery day, after weeks of flood, the average for the forty-nine head ran up to within a trifle of £35; as, taken altogether, this was considered a very fair sale. The lots for sale were conveniently arranged for inspection, and brought out, each bull-calf with its dam. The Vale farmers were numerous, and there were many strange faces from Cornwall, Devon, and the southern counties, as well as a few from Yorkshire and the Midland districts. A lot of fat bullocks were driven into the ring for sale before the party from the Castle arrived, and soon after one o'clock Mr. Thornton commenced the more legitimate business.

The bulls were headed by Lord Wild Eyes 5th, now in his sixth year, who has been used with the herd for the last three seasons, and his blood having been so thoroughly introduced he was offered unreservedly, as was all the other stock. Put in at 40 gs., he gradually rose up to 50 gs., when Mr. H. Fawcett, Leeds, bid "one," and took the bull, a cheap purchase, into Yorkshire. The most attractive lot among the bulls was the young Duke of Ozleworth, a rich hairy roan calf of immense growth, but rather thin in condition: the bids ran from 30 to 40, 50, 60 gs., until Mr. Gay, Attwater, and Mr. Tremaine, from Cornwall, settled down to single guinea competition, and the former got him at 78 gs. Mr. Pope took the next lot, a good deep hairy eleven months' calf, by the Kingscote bull, Third Duke of Clarence, at 53 gs., and Duke of Miserden, a calf purchased at Ozleworth, doubled his cost price, and fell to Mr. F. Cowcher for 37 gs.

The sale included both males and females of the Florentia tribes, and they made fair prices, though not up to the Didmorton average. Florentia 15th, a broad-backed handsome roan five-year-old cow, was bought by Mr. Burbidge for 56 gs., and Mr. W. Percy got her roan bull calf at 31 gs. Mr. J. Rolt gave 41 gs. for Florentia 20th, a newly-calved heifer; and Florence, three years old, out of the 15th, seemed reasonable at 42 gs. (A. Fletcher). One of the best tribes was Belvoir Belle and her three heifers. This cow, a good white animal by the Seventh Duke of York, was a cheap investment for Mr. Rolt at 51 gs., and her two-year-old heifer by Third Duke of Clarence, seven months in calf, was apparently cheaper still at 50 gs., which Mr. Bowly bid, but he afterwards gave her up to Col. Luttrell, Col. Kingscote giving but 11 gs. for her own sister, a little white January calf. There was a reasonable in-calf Ursula heifer, the 31st, at 39 gs. (Mr. J. Godfrey), by Second Duke of Claro, and Col. Luttrell took two of the handomest lots, Delia and Comely 2nd, nice roan yearling heifers, at 93 gs. the pair: they were bred from good Darlington cows with three and four crosses of blood, indeed the highest bred animals seemed to go off the cheapest. A few additional animals, belonging to Sir Geo. Jenkinson

(three young bulls at £34 each), Mr. Hooper, and Capt. Robinson, made respectable figures, the whole sale amounting to over £1,700, and resulting in an average of £37 16s. 8d. for the 31 Berkeley lots. Grand Duke of Waterloo, a son of Col. Gunter's Third Duke of Wharfedale, and the purely-bred Waterloo 32nd, by Seventh Duke of York, reigns lord of the harem, at the Castle farm, among a few capital cows and heifers of the Wild Eyes, Musical, Bracelet, Ursula, and other favourite strains.

After the Shorthorns were disposed of, a number of young Berkshire pigs were sold at capital prices. A pair of beautiful young hiltz were bought by Mr. Solt, and Col. Luttrell and Mr. Crawshaw were the other principal purchasers. Dick Swiveller, second-prize boar at Cheltenham, realized 10 gs. (Mr. Green), and the sixteen young pigs amounted to £100 5s. 6d.

MR. W. BOLTON'S SHORTHORN SALE,

AT THE ISLAND, CO. WEXFORD, ON TUESDAY,
MARCH 12, 1872.

BY MR. JOHN THORNTON.

A pleasant ride from Dublin through the Vale of Ovoca brought us to Ferns, and another ten miles on a jaunty car to The Island, a fine demesne, owned for generations by the Bolton family. It is pleasantly situated about two miles from the sea on rich good soil, which grows not only luxuriant grass, but under cultivation fine swedes, several being shown in the yard, weighing nearly five-and-twenty pounds each. The herd of cattle was an heirloom, the father of the present owner having got the best cows he could purchase, and crossed them with bulls from Mr. La Touche, Archbold, and other old Irish breeders. The object of the herd was the production of Wexford butter, and no record was kept of the stock until Mr. W. Bolton came into possession. He upheld the paternal rule for many years, of buying a good bull, hunting a fox, as well as rearing some capital hunters; but after a time, as Shorthorn business opened in the district, chiefly through the exertions of Mr. Sam. Armstrong, of Enniscorthy, he kept an account of the breeding of the cattle, as well as the weight of the butter-tubs. Two or three bulls were obtained in England. Mr. Cruickshank's herd supplied Nugget (18474) and Prince Consort (16729), and then followed bulls of Booth blood, which have since been continued by hiring the very best that Warlaby can supply.

The rain came down in a disagreeable drizzle till noon, when the sun burst out and made everything bright and cheerful. A walk previously through the complicated range of cowhouses, told of what materials the herd consisted. Large fine roomy cows were here showing abundance of hair and mellow quality, whilst their udders testified to their doings at the pail. In the nursery were fourteen of the bonniest little calves we have seen for many a long day, all broad backed, deep coloured little animals, as lively and playful as kittens. Dozens of two-year-olds and yearlings were turned out from apparently an inexhaustible shed, Gwynnes and Glossys galore, and in Pat McGill's words, "They were, shure, Dicks or Ricos," after the bulls King Richard (26523) or Manrico (26805), both were on hire from Mr. Booth. "Two hundred and four to the day of the auction" was the roll muster of the herd, and then Pat had quite a small army in command with halter in hand for the bull show. Discipline, silent and military, in its system prevailed, and neither "tip nor treaty" could tempt a subordinate to show out, "till Mister Pat led the way." Out they came: first a deep

red, then roan, then red, and roan followed again, not a white in the whole 20, and only a couple red and white in earnest, or what might be called plain coloured. Their health and vigour were excellent, and well as an "Irish herd" can manage a bull, the ring was often broken "by the play of the baste." The most striking effect was the abundance of rich soft long hair and heavy flesh that every beast showed. One fine roan fellow had got hurt and went badly, still he was paraded with the rest, and dreadfully sacrificed at 17 gs. when he was sold. A beautiful roan Gauntlet calf, of eleven months, was quite the favourite, and many regretted his absence from Dublin Spring show, as it was considered only a very extraordinary animal could beat him. Some of the heifers were shown, and thick good fleshy cattle they looked. Then followed the majestic King Richard, a grand-looking bull of immense substance, and the deep-sided massive Manrico. A roan heifer followed these bulls, and she was the admiration of the whole company. It turned out she was the 750 gs. Mantalini heifer, that had, in the opinion of those present, greatly improved and developed since the Westland sale; at all events she was an "ilegant" creature of great size, with a rotundity of rib and width of carcase one seldom sees. Her hair blew about on her back three inches long; and she is to be mated, not with either of the two bulls who now reign, but a splendid yearling which Mr. Bolton is hiring from Mr. Booth, called Lieutenant-General. A stand-up lunch, with "cut-and-come-again" joints, was supplied. No speeches were made, and soon after two Mr. Thornton was before an audience in the yard of 300 to 400 strong. He said that no country like Ireland was so well adapted for the growth of good cattle, and well might County Wexford be proud of its breeders, one of whom has taken the prizes from England, and the other brought over the best blood. There was a dull sale for the cows and heifers, and, although cheap as their prices appear in England, they were considered about £10 over market value in Ireland. One very good white might win with little training, and she fetched the highest price (£6 gs.) from a local breeder. The bulls were in better demand, and made fair good prices. Several Limerick men were the keenest bidders, and two or three lots go into the North of Ireland. The dispersion of such excellent well-bred cattle at the prices must in the end be fruitful of an incalculable amount of good in a country so thoroughly adapted for the breeding and rearing of both cattle and sheep.

SUMMARY.

15 cows averaged	£30 9s. 0d.	.....	£456 15s.
19 bulls	„ £37 11s. 7d.	.....	£714 0s.
34	„ £34 8s. 8d.	.....	£1,170 15s.

THE BALDERSBY SHORTHORN SALE.

ON FRIDAY, MARCH 22, 1872.

BY MR. THORNTON.

This sale included the late Mr. Mark Barroby's herd, bred at Dishforth, and a portion of Mr. W. Harland's herd at Blews Hall, Ripon. The Barroby stock was well known, chiefly through the pre-eminence and success of the bull Marc Antony, a Royal and county winner; it, consisted of only two families, the Emmas and Verbenas but they had been so interbred with slight crosses of Maynard and Booth bulls, that there was a similarity in character, though the Verbenas had the point in size, but not quite the elegance and fineness of the Emmas. Both tribes had, however, the faculty in common, so rarely met with in large herds, of

breeding uniformly good bulls. Out of the eight offered, there was not an indifferent one, and their strong masculine character, great substance, and enormous coats of hair were the surprise and talk of the company, which, notwithstanding one of the bitterest days of the whole winter, numbered some three to four hundred strong. There were knots of men from Northamptonshire, Westmoreland, Holderness, and the West Riding, as well as an Australian, to whom the inclement weather must have been a sore trial. Mr. Harland's cattle having, it appears, been reared on light sandy land had not the flesh nor substance of the Dishforth herd, though they were splendid in their crops, of beautiful quality, and fine milkers. Neither evidently were they prepared for sale, and there was doubtless much truth in Mr. Harland's remark that he considered it a sowing, not a reaping day. Mr. John Booth took the head of the table, and did the honours in capital style, especially when he got three lusty cheers for his own health and fox-hunting. Mr. Chris. Barrowby did duty for his late brother and living sister, who retires in her 80th year from the Dishforth farm, which he and his son Frank are about to occupy. Nothing could have been more unfortunate for the cattle than the day, inasmuch as being removed to Mr. Chris. Barrowby's farm, near Baldersby station, they had to travel that morning several miles, and what with the cold, and their saturated coats hanging to their sides, they looked possibly at their very worst. Still the competition was very general and brisk. The first cow, eleven years old, a fine breeder, made 47 gs., and the next, milked to a reduced state, went for 38 gs. Mr. Hutchinson, however, got the pick of the Emma tribe, a family containing sound and excellent blood. The heifers also sold well, and a splendid red of enormous size fetched 80 gs., the top price, from Mr. Lofthouse, of Borough-bridge. For the bull calves there was keen bidding, though the best could not be brought forward, and was, like lot 23, suffering from cramp in the fore-quarters, or rheumatism, a complaint that seems to be very general this season throughout the country. Mr. Harland's heifers sold fairly well, and were a very pretty lot, even better than the cows which showed great milking properties. The averages, though no high prices were obtained, were good, the Dishforth herd making a few shillings over 40 gs., and the Blews Hall 30 gs.

The summary of the day's doings stands thus:—Miss Barroby's 26 head averaged £42 13s.; Mr. Harland's 16 head averaged £31 10s. 8d. Total Sale: 48 head, £1,775 0s. 6d.; averaged, £37.

SALE OF THE LATE MR. JOHN CLAYDEN'S SHORTHORNS,

AT LITTLEBURY, MARCH 19, 1872.

BY MR. STRAFFORD.

It seems scarcely four years ago, when on a cold May morning we left Bishopsgate, at breakfast hour, to see the Littlebury herd dispersed. And a good sale it was, with a capital company, and average of £47 5s. for 59 head of useful well-fed cattle, showing plenty of dairy properties. Since then, that cheery voice, so well known to most of the public, has been frequently heard at the ringside, and it is touching to think that his last public appearance was also at the ring, not of Shorthorns, but of the Merton Southdowns, which were as dear to him as the red, white, or roan. Few will forget the great cloud that darkened that bright day in Norfolk, when it was spread abroad that Mr. Clayden had been seized with paralysis, and lay stricken down in a strange house, away from home and friends. It was, therefore, more

like a link with the past, that the company went down on Tuesday to see the last of those which he had taken such pains to collect. He bought Coral, a pure Charmer, a little time prior to his last sale for his nephew, and afterwards took her, as well as Gauza, one of the very last bred by the late Fawcett Baronet. At Mr. McIntosh's sale he invested further in Archduchess of Cambridge, and supported his county by sending her back to Third Duke of Geneva, the Havering Park sire. To these Knightley purchases he added the more fashionable element in Surmise 2nd and Duenna, both of Bates' blood, the former from Brailes, the latter from Lord Penrhyn; as also Brigantine, a Foggathorpe, and Bracelet 11th, from Sholebroke. He had a great fancy for the bull Captain Knightly, and used him from a yearling until the present time, but he invested, as a little change, in Lord Skelmersdale's Duke of Florence, a white Bates upon Mason. With the Audley End herd to fall back upon he had no lack of sires, so although several lots were accredited to Capt. Knightley, Thorndale Duke had some after him, as well as Sir Rainald, a bull he bred at home from Eugene 2nd, one of the best cows in the herd, bought from Earl Spencer in 1865, by a Bushey bull from a Knightley dam.

The catalogue had the double attraction of twenty very choice heifers, and a dozen useful young bulls, and they were certainly brought out in a manner highly creditable to the management during last autumn and winter. Those old-fashioned straw-yards showed them off to great advantage, and it was difficult to catch the public's fancy, whether for the old cows, the young heifers, or the yearling bulls, which with the nobby, curly headed Capt. Knightley were paraded before lunch. Snow, hail, and a cold nor-easter; were, however, not the most favourable auspices for a bull show, and the company were glad to adjourn to that huge barn, where a bountiful board and good cheer were provided, but at which daylight had to be helped by candles. Mr. McIntosh presided, and after the usual toasts the company went to the covered rostrum and sheltered waggons round the ring. Mr. Strafford paid a fitting tribute of respect to his old and lost friend, and regretted the breaking up of so beautiful a little herd, which was in itself a mere germ. But there was a good company to appreciate it, including Lord Skelmersdale, Lord Howe's agent, Col. Kingseote, Mr. Foster, Mr. Sartoris, Mr. Barnes, Sir C. M. Lampton's agent, Capt. Reed, Mr. Herbert Little, Mr. F. Lency, Mr. Mace, Mr. Larking's agent, Mr. Barnard, Mr. Daniel Hill, Mr. Rand, Mr. Thornton, Mr. Christy, Mr. Tippler, Mr. Green, and many other fanciers of the sort.

Archduchess of Cambridge with her patchy quarters bore her 13 years well, and seemed cheap enough at 40 gs., and fresh enough to bear her journey to Mr. H. Fawcett's farm near Leeds, which is just being well stocked. Mr. Fawcett hung well on to the dowager twelve years old Surmise, a large deep-bodied cow; but Mr. Foster is hard to shake off, and she joins the Killhow herd at 100 gs. The third lot, half the age of the others, was a fine specimen of a Shorthorn, and considering she was more than half gone in-calf, went very cheap to Mr. Tracy at 50 gs. Duenna was a 110 gs. purchase last spring at Lord Penrhyn's sale, and Mr. Sharpley got her reasonably enough at 5 gs. under cost price, considering she was also half gone to Mr. McIntosh's Third Duke of Geneva. Her calf, a great beauty, though a trifle small for its age, goes back to head-quarters, at a considerable profit for the new milk. Grace Costa, an elegant stylish-looking cow, somewhat defective in her crops, accompanies Archduchess of Essex, one of the nicest lots in the sale, to the Weston Park herd. Mr. H. Fawcett got one of the thickest and broadest cows of the herd in Cordelia,

though her hip was disfigured, and her pedigree boasted "if any flaw, a bit of the better sort," for she was by Lady Pigot's Mars, out of Mr. Adkins' Coral. At 60 gs. she was certainly a bargain, and her heifer by Capt. Knightley, a pretty roan yearling, showing perhaps more substance than any, was secured for Mr. Albert Dangar in Australia.

Brigantine, a four-year-old Foggathorpe, had not yet bred, and looked more like a Smithfield winner, which her price (36 gs.) justified. Christmas Carol, a pure Charmer upon Charmer, was eagerly sought by connoisseurs. She was of rather a spotted roan and looked like milk. The snow came down as she entered the ring, and the 50 gs. bid shot to 70, 80, 85, 90, "one," "five"—sherry—which sent her along until Mr. Lency got her for his son at 120 gs. If Lucy Knightley had been in a more forward state the 100 gs. paid her would probably have been much increased, and Grace Knightley, her own sister in blood, seemed reasonable at 51 gs., though she had lost her hair. For Silent, an improving-looking heifer, Mr. Richardson and Mr. Sharpley side by side until Lincolnshire beat Sussex. Bracelet 11th, ten years old, had lost her calf and appeared out of sorts; she has the making of a fine animal, but Mr. Barnes was shaken off at 94 gs., Mr. W. H. Oakey obtaining her. The crack lot of the sale then walked in—a good red heifer of great size, with fine loin and quarters, though a trifle strong in her shoulders. Her Duke sire, and Coral her pure Charmer dam, were great attractions, and she had dropped at 25 months old a bonny little roan b. e., which brought 28 gs. From 100 to 150, 80 and 200 for Australia, was the work of a few seconds; then came 5 and 10, and a question from Mr. Oakey, "Am I in?—then put me in, 'fifteen'—go on again," brought twenty—"and five" sent up the glass, and she went at 225 gs. "Is it Green?" was asked from the rostrum. "No, not so green as that," replied the individual in question, and so Mr. Oakey got quite the pick of the sale, as well as Capt. Knightley, at beef price, though he does not seem to be quite the cross for so good a heifer.

The biddings were brisker for the calves, and Mr. Smith had much endurance before he could shake off Mr. Oakey and others for Duet at 145 gs. Mr. Foster took the last heifer, a white calf at 56 gs. For the bulls there was a very fair and general competition. The pick of them was a hairy, robust June calf, by the Third Duke of Geneva from Old Archduchess, which Mr. Savill purchased at certainly a cheap price (83 gs.). The count-up showed a total of £2,341 10s., or an average of nearly 70 gs. the bulls being £44, and the cows £90, which, considering that the sale was really the first important event of the season, must be taken as a very satisfactory result.

COWS AND HEIFERS.

Archduchess of Cambridge, red and white, calved Nov., 6, 1859; by Archduke 2nd (15588).—Mr. W. Fawcett, Seaford Castle, Leeds, 40 gs.
 Surmise 2nd, red, calved Feb. 20, 1860, by May Duke (13320).—Mr. J. P. Foster, Killhowe, Cumberland, 100 gs.
 Erigone 2nd, red, with little white, calved July 6, 1865; by Cock of the Midden (23585).—Mr. G. M. Tracy, Edenbridge, Kent, 50 gs.
 Duenna, red and white, calved January 9, 1866; by 11th Grand Duke (21849).—Mr. H. Sharpley, Louth, 105 gs.
 Grace Costa, roan, calved September 9, 1867; by Costa (21487).—Sir George R. Phillips, 90 gs.
 Cordelia, red and white, calved January 10, 1863; by Mars (24543).—Mr. Fawcett, Leeds, 60 gs.
 Brigantine, white, with roan ears, calved March 25, 1868; by Caesar (23499).—Mr. Green, Donyland Place, Colchester, 36 gs.
 Archduchess of Essex, rich roan, calved October 4, 1868; by Costa (21487).—Sir George Phillips, 120 gs.

Gertrude, red, calved December 10, 1868; by Littlebury (24341).—Mr. J. J. Stone, Scyborven, Wales, 55 gs.
 Christmas Carol, light roan, calved December 11, 1868; by Costa (21487).—Mr. E. Leucy, Waterringbury, Kent, 120 gs.
 Lucy Knightley, rich roan, calved February 10, 1869; by Captain Knightley (25716).—Mr. J. P. Foster, 100 gs.
 Grace Knightley, red and little white, calved October 12, 1869; by Captain Knightley (25716).—Mr. McIntosh, Havering Park, Romford, 51 gs.
 Silent, rich roan, calved January 3, 1870; by Earl of Warwickshire (26079).—Mr. H. Sharpley, 100 gs.
 Bracelet 11th, red and white, calved January 23, 1870; by 7th Grand Duke (19877).—Mr. W. H. Oakey, Cambridge, 94 gs.
 Claro's Coral, rich red, calved February 12, 1870; by 2nd Duke of Claro (21576).—Mr. W. H. Oakey, 225 gs.
 Ganymede, red and white, calved January 17, 1871; by Sir Rainald (30001).—Mr. J. J. Stone, 41 gs.
 Carrie Knightley, rich roan, calved January 16, 1871; by Captain Knightley (25716).—Mr. J. Thornton, for A. A. Dangar, Australia, 91 gs.
 Duet, red, calved April 11, 1871; by Cherry Duke (25752).—Lord Penhryn, 145 gs.
 Azalea, red, calved January 18, 1871; by Duke of Babraham (25934).—Mr. J. Christy, Boynton Hall, 48 gs.
 Cameo, white, calved July 17, 1871; by Sir Rainald (30001).—Mr. Foster, 56 gs.

BULLS.

Captain Knightley (25716), rich roan, calved May 23, 1867; by Knightley (22051).—Mr. W. H. Oakey, 50 gs.
 Duke of Florence (28388), white, calved March 5, 1870; by 15th Duke of Oxford (23776).—Mr. Collett, near Cambridge, 40 gs.
 Archduke Knightley (27890), rich red, calved March 20, 1870; by Captain Knightley (25716).—Mr. H. Little, Northcote, 50 gs.
 General Knightley (28695), rich roan, calved October 26, 1870; by Captain Knightley (25716).—Mr. W. Smith, 48 gs.
 Archduke Thorndale (27891), rich roan, calved December 2, 1870; by Thorudale Duke (27661).—Mr. R. C. Ridge, Australia, 40 gs.
 Surmise Thorndale, red, calved January 5, 1871; by Thorudale Duke (27661).—Mr. T. Nichol, 47 gs.
 Archduke of Geneva, rich roan, calved June 25, 1871; by 3rd Duke of Geneva (23753).—Mr. G. Savill, Ingthorpe, near Stamford, 83 gs.
 Kingcraft, red and little white, calved July 29, 1871; by Captain Knightley (25716).—Mr. J. Turpin, 31 gs.
 Major Knightley, rich roan, calved December 4, 1871; by Captain Knightley (25716).—Mr. E. Mertens, 31 gs.
 Dandy Surmise, rich roan, calved December 9, 1871; by Claro's Rose (25784).—Mr. Tebbutt, 37 gs.
 Starlight, white, calved January 7, 1872; by Duke of Florence (28388).—Mr. H. Stone, 48 gs.
 Bull-calf, roan, calved March 6, 1872; by Duke of Florence. —Mr. Edward Clayden, Burham Hall, Linton, Cambs., 28 gs.

SUMMARY.

	Average.		Total.
20 Cows	£90	13 4	£1,813 7 0
12 Bulls	44	0 3	528 3 0
32	£73	3 6	£2,341 10 0

SALE OF THE SITTITON SHORTHORNS.

This annual sale of Mr. Cruickshanks' young stock was very numerously attended. The highest price was 69 guineas, and the average over the 33 bulls offered was £44, £2 less than the average of last year. Mr. Mitchell was the auctioneer.

BULLS.

Sovereign, red, calved 1870; by Senator.—Mr. J. Gunn, Lybster Wick, 31 gs.
 Bachelor of Arts, red, 1869; by Cæsar Augustus.—Lord Lovat, Beaufort Castle, Beaulieu, 51 gs.
 Bolivar, roan, 1870; by Champion of England.—Mr. A. Rennie, Mill of Collie, Udney, 51 gs.
 Coronation, roan, 1870; by Scotland's Pride.—Mr. Brand, Auchenten, Cruden, 54 gs.
 Enterprise, red, 1870; by Baron Oxford.—Mr. Chalmers, Rothiebrishbane, Fyvie, 56 gs.

Orange Boy, red and white, 1870; by Scotch Rose.—Mr. Davidson, Oldhall, Caithness, 50 gs.
 Erasmus, white, 1870; by Senator.—Mr. Collie, Lairdshill, Fintray, 44 gs.
 Lord Oxford, roan, 1870; by Prince of Prussia.—Mr. W. Mackenzie, Auchindunie, AIness, Ross-shire, 49 gs.
 Macgregor, red and white, 1871; by Scotch Rose.—Sir G. S. Abercrombie, Bart., of Forglan, 67 gs.
 Baron Ossington, roan, 1871; by Master of Arts.—Mr. Milne, Corse of Kinnoir, Huntly, 40 gs.
 Victor Royal, red, 1871; by Cæsar Augustus.—Mr. Longmore, Rettie, by Banif, 69 gs.
 Alonzo, roan, 1871; by Cæsar Augustus.—Mr. Mitchell, Drunderfit, Muir of Ord, Beaulieu, 67 gs.
 Florida, red, 1871; by Golden Eagle.—Mr. Daniel, Downie, Peterhead, 42 gs.
 Victorious, red, 1871; by Master of Arts.—Mr. Fortescue of Kingcausie, 32 gs.
 Chief Baron, roan, 1871; by Senator.—Mr. Rainnie, Wester Fintray, 37 gs.
 Signet Royal, red, 1871; by Cæsar Augustus.—Mr. Jackson, Millbrae, Bourtie, 38 gs.
 Royal Rose, red and white, 1871; by Scotland's Pride.—Mr. Anderson, Tillygreig, Udney, 33 gs.
 Battledore, roan, 1871; by Master of Arts.—Mr. Harvey, Pitgersie, Foveran 45 gs.
 Royal Symbol, red, 1871; by Cæsar Augustus.—Mr. Fraser, Fallow, Inverness, 44 gs.
 Chief Justice, red, 1871; by Senator.—Mr. Walter Wilson, Orchard House, Hawick, 27 gs.
 Sincure, red, 1871; by Senator.—Mr. Charles Alexander, Beadlieston, Dyce, 39 gs.
 Lord Bantam, roan, 1871; by Scotland's Pride.—Mr. Clymont, Balsaggart, Ayrshire, 26 gs.
 British Flag, red, 1871; by Cæsar Augustus.—Mr. Gray, Tillymaud, Cruden, 36 gs.
 Solomon, red, 1871; by Cæsar Augustus.—Mr. Catto, Fowlershill, Newmachar, 32 gs.
 President, white, 1871; by Scotland's Pride.—Mr. Tait, Chriche, Inverurie, 37 gs.
 Starlight, white, 1871; by Master of Arts.—Mr. Emslie, Cairnton, Kenney, 40 gs.
 Sweet William, roan, 1871; by Senator.—Mr. James Henderson of Blybster, Caithness, 45 gs.
 Syntax, red, 1871; by Senator.—Mr. Cruickshank, Conland, Forgue, Huntly, 36 gs.
 Bullion, red and white, 1871; by Cæsar Augustus.—Mr. Shaw, Tillycheg, Lumphaan, 35 gs.
 King William, red, 1871; by Cæsar Augustus.—Mr. James Bartholomew, Duntarvie, Linnlithgow, 31 gs.
 Orlando, red, 1871; by Scotland's Pride.—Mr. Ross, Kinna-haird, Muir of Ord, 36 gs.
 Britannia, red, 1871; by Scotland's Pride.—Mr. Wm. Troup, Pett, Tarland, 32 gs.
 Farewell, roan; by Scotland's Pride.—Mr. Suow, Sinton, Parkhead, Roxburghshire, 30 gs.

HEIFERS.

Valetta, roan, 1871; by Master of Arts.—Mr. Ironside, Mill of Colp, Turriff, 25 gs.
 Airy Buckingham, roan, 1871; by Master of Arts.—Mr. Mollison, Dochfour, Inverness, 41 gs.
 Water Cress, roan, 1871; by Master of Arts.—Mr. Mitchell, Orchard Head, Fife, 28 gs.
 Ella Buckingham, red, 1871; by Senator.—Mr. Gordon, Cluny, 32 gs.
 Wood Rose, red, 1871; by Master of Arts.—Mr. Stevenson, Durn, Portsoy, 18 gs.
 Gilded Eye, roan, 1871; by Master of Arts.—Sir William Forbes, Bart., Craigievar, 40 gs.
 Queen Mary, red, 1871; by Cæsar Augustus.—Mr. Stevenson, Durn, Portsoy, 27 gs.
 Acacia, red and white, 1871; by Cæsar Augustus.—Mr. Gordon, Cluny, 46 gs.
 Cypress, red, 1871; by Senator.—Mr. Bartholomew, Duntarvie, Winchburgh, Linnlithgow, 30 gs.
 Water Lily, red, 1871; by Master of Arts.—Mr. Ironside, Mill of Colp, Turriff, 21 gs.
 Casket, red, 1871; by Senator.—Mr. Thomson, Canada, 50 gs.
 Constantia, red, 1871; by Senator.—Sir William Forbes, Bart., Craigievar, 40 gs.

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The position of the trade has not undergone any radical change. The supplies of stock have been moderate, and the greater proportion of the receipts have come to hand in such condition as has given satisfaction. As regards beasts the Norfolk arrivals have testified to the abundance of keep, and from most other counties the result has been equally satisfactory, although in some instances stock has been prematurely forced upon the market from fear of contagion. From Scotland a moderate supply has been received, in the usual fine condition. Although trade has not been animated during the month, a sufficient amount of activity has been apparent to promote some degree of steadiness in values, and the best Scots and crosses have been disposed of at 5s. 4d. to 5s. 6d. per 8lbs.

With references to sheep the supplies have been rather larger, and the quality has been very good. Woolled sheep have sold freely, and the best Downs and half-breeds have been sold at 7s. 2d. to 7s. 4d. per 8lbs. For the choicest clipped sheep the top quotation has been 6s. 2d. to 6s. 4d. per 8lbs.

Lambs have been scarce and very dear. Calves have been in moderate supply and request, at full prices.

Pigs have changed hands quietly, at about the rates previously current.

The total imports of foreign stock into London during the past month have been as follows:

	Head.
Beasts	2,279
Sheep and Lambs	51,103
Calves	759
Pigs	165

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	March, 1872.	March, 1871.	March, 1870.	March, 1869.
Norfolk, Suffolk, Essex, and Cambridgeshire	6,750	9,530	5,950	4,806
Other parts of England	1,650	2,677	2,310	2,677
Scotland	855	657	906	657
Ireland	400	920	1,670	920

The total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month have been as under:

	Head.
Beasts	14,805
Sheep and Lambs	111,815
Calves	1,146
Pigs	675

COMPARISON OF SUPPLIES.

March.	Beasts.	Sheep and Lambs.	Calves.	Pigs.
1871	15,620	102,545	709	610
1870	15,112	115,855	1,029	440
1869	18,950	132,910	1,165	525
1868	20,380	127,260	1,146	2,270
1867	14,460	95,600	1,100	1,500
1866	15,511	117,550	1,075	2,205
1865	22,400	86,752	1,142	3,015
1864	21,500	91,890	1,218	2,680
1863	18,653	88,560	935	2,432
1862	18,200	83,040	881	2,810

Beasts have sold at from 3s. 2d. to 5s. 6d., sheep 4s. 8d. to 7s. 4d., calves 4s. 6d. to 6s., and pigs 3s. 8d. to 5s. per 8lbs. to sink the offal.

COMPARISON OF PRICES.

	March, 1871.			March, 1870.		
	s.	d.	s.	s.	d.	s.
Beef from	3	0 to 5	8	3	2 to 5	2
Mutton	3	4 to 6	8	3	0 to 6	0
Lamb	7	6 to 8	0	7	6 to 8	0
Veal	3	8 to 6	0	3	10 to 6	0
Pork	3	6 to 5	2	4	6 to 5	8
	March, 1869.			March, 1868.		
	s.	d.	s.	s.	d.	s.
Beef from	3	4 to 5	8	3	4 to 5	0
Mutton	3	4 to 6	8	3	8 to 5	4
Veal	4	8 to 6	2	4	2 to 5	4
Pork	3	8 to 5	2	3	4 to 4	2

HOP MARKET.

Mid. and East Kent	£10 10	£12 12	£17 0
Weald of Kent	8 10	9 9	10 10
Sussex	7 15	8 8	9 9
Farnham and country ...	11 11	13 0	16 0
YEARLINGS.			
Mid. and East Kent	£3 0	£4 4	£6 10
Weald of Kent	3 0	4 0	5 15
Sussex	3 0	3 10	5 5
Farnham and country ...	—	6 0	7 0
Olds	1 5	1 10	2 0

POTATO MARKETS.

SOUTHWARK WATERSIDE.

Yorkshire Flukes	100s. to 140s.
Regents	60s. to 100s.
Dunbar and East Lothian Regents ...	100s. to 130s.
Perth, Forfar, and Fife	80s. to 110s.
Regents	70s. to 80s.
Kent and Essex Regents	60s. to 100s.
Regents	60s. to 70s.
French Whites	50s. to 60s.

BOROUGH AND SPITALFIELDS.

Regents	70s. to 120s. per ton.
Rocks	70s. to 85s. "
Flukes	100s. to 140s. "
Victorias	95s. to 130s. "

PRICES OF BUTTER, CHEESE, HAMS, &c.

BUTTER, per cwt.:	s.	CHEESE, per cwt.:	s.
Dorset	150 to 160	Cheshire	66 to 78
Friesland	140 146	Dble. Glouce., new	60 76
Jersey	112 136	Cheddar	74 90
FRESH, per doz.:	15 18	American	68 76
BACON, per cwt.:	60 62	HAMS, York	84 98
Wiltshire, green	60 62	Cumberland	82 98
Irish, green, f.o.b.:	62 64	Irish	84 92

ENGLISH WOOL MARKET.

CURRENT PRICES OF ENGLISH WOOL.			
	s.	d.	s. d.
PLEECES—Southdown hogs	1	11½	2 0½
Half-bred ditto	2	1	2 2
Kent fleeces	2	1	2 2
Southdown ewes and wethers ...	1	10	1 11
Leicester ditto	1	10	1 10½
SORTS—Clothing, picklock	1	7	1 10
Prime	1	4	1 5
Choice	1	3	1 3½
Super	1	2	1 2½
Combing, wether mat.	2	1	2 2
Picklock	1	9	1 10
Common	1	6	1 7½
Hog matching	2	2	2 3
Picklock matching	1	9	1 10
Super ditto	1	6	1 7½

BRESLAU WOOL REPORT, March 21.—The demand for our article is continuing with unabated liveliness, and prices are firmly maintaining their high rank. Almost all descriptions are required, and middle-line qualities have been completely emptied. Only the super-select flocks remain unsold, owing to the extreme pretensions of owners. The total sales during the last fortnight was about 3,000 cwts., which quantity has been fully compensated by simultaneous fresh arrivals from Poland and Russia.—GUNSBERG BROTHERS.

THE SALE OF SEED CORN.—At the Notts assizes before Mr. Justice Quain, an action was brought by Mr. Charles Levers, farmer and corn factor, of East Bridgford, near Nottingham, against Messrs. Goddard and Wells, corn factors, of Nottingham, to recover £500 damages for supplying him with defective wheat. In April last plaintiff saw the defendant Wells at the Nottingham Corn Exchange. Wells asked him if he wanted any spring seed wheat. Plaintiff replied that he did, and was shown a sample of what the defendant assured him was spring seed wheat. He purchased 50 qrs., and resold it to various farmers, but in every case where it was sown the crop failed. Actions were brought against plaintiff by those farmers, and he had paid £393 in satisfaction of their claims. The defence set up was that the defendants did not actually guarantee the grain to be spring wheat, but that Wells had expressed his belief to that effect from what one or two farmers had said to him. His lordship held that a man had a right to be served with what he asked for, and the jury returned a verdict for the plaintiff—damages £128.

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

The close of February was mostly fine, but rather too wet after the heavy fall in January. March for above the first fortnight was more like spring than itself, being mild, sunny, and stimulating vegetation to a degree of danger. On the third week, however, a sharp frost, followed by a heavy snow-storm. The spring flowers drooped their heads, and we were sharply reminded that winter had not quite left us. The grass which was growing fast must be seriously checked, if not damaged, and the forward fruit trees can hardly have passed through the difficulty scot free. The previous dry weather was, however, heartily welcomed, and very much land which had been laying almost hopelessly sodden was got into culture, and spring planting began in right earnest, wherever practicable, beans and peas taking the lead, and oats quickly following. Much depends on the termination of the month as to the sowing of barley and spring wheat, but after the changes we have seen, let us yet hope for the best. The young wheat, both early sown and late, has hitherto done well and become strong, the night frosts contributing to give a wholesome check to its luxuriance; but the promise with which the month opened, the loosening of the ice in many northeru ports, and above all the very heavy and unexpected fall of breadstuffs at Paris, where there has been a decline of 10s. per sack on flour, and a proportionate reduction in wheat, have so unhinged the wheat trade here that rates have given way about 3s., and on inferior foreign the fall has been 5s. to 6s., causing such a heavy loss to importers, who cannot replace to advantage, that we expect, after the first effect of present arrivals is over, there will be a falling off in our receipts, and a moderate reaction in prices for qualities really serviceable, and especially fine, the latter continuing scarce abroad as well as here; indeed, in floating cargoes the reaction had commenced at the close. The sales noted in four weeks were only 202,033 qrs., while for the same time last year they were 299,498 qrs., showing a deficiency of 97,465 qrs., or nearly one-third. This must indicate a reluctance to sell on the part of farmers, or a great reduction of the stock on their hands; and as the fall in France began at Paris, as the consequence of over-trading and slender means under the present monetary difficulties of France, we do not think values can materially lessen, in spite of their possessing a good crop of spring corn, especially as the late imports from Southern Russia lose much money, and fine qualities are everywhere scarce throughout Europe. The ports of the Baltic have not yielded in a like proportion, and shipments to France thence must greatly diminish, unless there be a material advance. At New York they are slightly dearer, and the canals are not now likely to open before May. The following rates were recently current at the places named: Best native white wheat at Paris 58s., red 55s.; Chili white 59s. 3d., winter American 56s. 6d. per qr. In Belgium prices range from 55s. to 56s. 6d., best Polish wheat at Amsterdam 60s., new Zealand at Rotterdam 56s., red wheat at Hamburg 52s., at Cologne 53s., high-mixed at Danzie 61s., at Konigsberg 60s. per qr., cost, freight, and insurance, red at Porrentruy 52s., at Pesth 55s., common red at Ibrail 34s., soft Ghirka at Odessa 42s., ditto at Taganroc 45s., Barletta at Naples 56s. 6d., best soft at Algiers 62s., fine white at Valladolid (Spain) 42s., Californian at Sau Francisco 56s. 6d. per qr. cost, freight, and insurance, red winter at New York 55s., spring 52s.

The first Monday of this four weeks, which commenced on February 26, opened in Mark Lane on small English and good foreign supplies. The show of fresh samples during the morning from Essex and Kent was scanty, and the condition rather improved. Yet only the driest parcels could be sold at previous rates, inferior being fully 1s. per qr. lower, and most difficult to place. Though there was a good attendance from the country, the demand for foreign was but limited, and while really fine qualities obtained the previous rates on retail, lower sorts were fully 1s. per qr. cheaper to sell. Cargoes afloat were little inquired for, and quite 1s. lower. With variable but, on the whole, seasonable weather, the country wheat trade was dull, the condition of samples generally being very little improved. Dry samples maintained their previous value, but inferior lots found but few buyers at lower prices. Liverpool at the close of the week gave way 2d. per cental, or 10d. per qr. Foreign wheat at Glasgow was down 1s. per qr., but prices at Edinburgh were unchanged, with a slow trade. With dull and cloudy weather at Dublin, business was limited, and prices much as previously.

On the second Monday, the English supply was more scanty, and the foreign fell off very materially. The fresh samples exhibited from the near counties were but few in number, and still deficient in condition, though rather better than of late. Factors found that, notwithstanding the short supplies, they must give way fully 1s. per qr., and even then sales were difficult, dry lots excepted. The foreign trade also remained very dull, and but little business could be done, though there was a general determination to accept a reduction of 1s. per qr. With a good arrival of floating cargoes buyers were scarce at the same decline. The weather this week turning out remarkably fine, and the London advices being unfavourable, country holders and farmers who were resolved on sales found they could make no way without submitting to lower rates; say, generally 1s. per qr., as at Birmingham, Bristol, Brigg, Louth, Maidstone, Manchester, Rochester, Stockton, and Wolverhampton, while some, as at Gloucester, accepted 1s. to 2s. per qr. less money. Liverpool was down 4d. to 6d. per cental, or 1s. 8d. to 2s. for the week. The Scotch markets also yielded, Edinburgh and Glasgow to the extent of 1s. to 2s. on native and foreign sorts. Though the scarcity of native wheat at Dublin kept it from a fall, foreign gave way 6d. per barrel.

On the third Monday the English supplies were still small, but the foreign were good. The morning's show of fresh samples on the Essex and Kentish stands was again scanty, but the condition was certainly better from the more favourable weather, still there was no doing any business but at a further decline of 1s. to 2s. per qr., and trade even then was far from brisk. In foreign the same languor prevailed, the French markets showing no symptoms of recovery. The best samples gave way 1s. per qr., and inferior were difficult to place at a still heavier reduction. Floating cargoes, generally held at the previous currency, found very few buyers. With a continuance of extremely fine weather the country wheat trade found it impossible to resist the influence of the London decline, and a similar reduction of 1s. to 2s. was reluctantly conceded, excepting for anything unusually prime. Liverpool gave way on Friday 6d. to 1s. per qr. In Scotland there was less inclination to follow the down-

ward course. Edinburgh found sales practicable at only 6d. to 1s. less money, and Glasgow did not give way over 1s. per qr. Wheat at Dublin was not equally reduced, the fall being only 3d. to 6d. per brl.

On the fourth Monday the English supplies were rather lessened, but the foreign much increased by free arrivals from Danzig and the Black Sea. The Kentish and Essex stands were again but scantily supplied with fresh samples; the condition, however, was better than for some time past—say since the commencement of the year. In spite of this, however, the fine weather and French advices being adverse to prices, they further gave way 1s. per qr., with still a difficulty in selling. In foreign business was also limited, and all descriptions were fully down to the same extent. Floating cargoes were yet more difficult to place, and low sorts were down about 2s. per qr. The return of wintry weather this week checked the tendency to decline in the country markets, many of which were unaltered, but Newark and some other places were down 1s. per qr. on average qualities, while a few were 1s. per qr. higher. Liverpool on Tuesday was fully as dear as on the previous week, and 2d. to 3d. higher per cental on Friday. At Edinburgh fine dry wheat brought 6d. to 1s. per qr. more, and Barley 6d., but Beans gave way 1s. per qr. Glasgow was firm for wheat, but dull for spring corn. Irish grain at Dublin was unaltered, foreign wheat 6d. per brl. lower.

The imports into London for four weeks were 14,179 qrs. English, 89,459 qrs. foreign, against 33,105 qrs. English, 57,480 qrs. foreign in 1871. The London exports were 2,748 qrs. The imports into the kingdom for four weeks ending March 9th were 2,331,118 cwt. wheat, 193,614 cwt. flour, against 1,987,207 cwt. wheat, 349,798 cwt. flour in 1871. The London averages commenced at 59s. 2d. and closed at 57s. 4d. The general averages opened at 55s. 7d. and ended at 55s. 8d. per qr., so they do not show the late decline.

The dullness of the flour trade having caused the supplies to lessen, prices have not been reduced in the same proportion as wheat, as for some time the trade was not a paying one. Yet a reduction of 1s. per qr. has to be noted in country sorts, the top price of Norfolks being only 38s. In foreign there has been very little passing, and the rates at New York leave no margin for importation here. The imports into London for four weeks were 66,699 sacks English, 6,179 sacks 6,404 brls. foreign, against 96,192 sacks English, 2,421 sacks 46,330 brls. foreign in 1871.

Though the arrivals of maize have not been heavy, this grain has given way in value every market day, the decline in four weeks amounting to 3s. per qr., fine fresh-mixed American being only worth 28s., and the best white about 31s. Prices abroad are relatively dearer, and one of two things is certain, either that foreign quotations must come down or our imports diminish; but the last American crop was good, and so we may yet get fair arrivals. The imports into London for four weeks were 43,805 qrs., against 3,048 qrs. in 1871.

The barley trade, in sympathy with everything else, has given way on British sorts fully 1s. per qr., on French sorts, from their abundance, about 3s., and on low grinding descriptions about 1s. The French imports being serviceable for inferior and porter-malt have quite paralysed the trade, and they have been severely felt in Ireland. Prices for such have ruled from 26s. to 29s., grinding sorts 20s. to 25s., best British malting 41s. to 42s. We think feeding sorts likely to improve as the season gets near its end; for foreign imports then fall-off, and our own stocks generally get cleared. The London imports for four weeks were 7,093 qrs. British, 78,439 qrs. foreign, against 8,375 qrs. British, 38,717 qrs. foreign in 1871.

The malt trade has ruled dull, and generally, prices have fallen 1s. per qr., with more anxiety on the part of holders to get clear of stocks.

The oat trade has been quite unsettled and shaken by the large and early foreign supplies, in consequence of the opening of the Baltic. Nearly every Monday has noted some decline, till for the four weeks it has amounted to 2s. per qr. Large imports coming from Belgium, and some also from France, have added to the difficulty of selling, some low qualities not bringing over 14s. 6d., while fair 38lbs. per bushel sorts have sold at 18s. to 18s. 6d. We cannot help thinking that the losses caused by these imports will diminish supplies, and bring about some reaction. The London imports for four weeks were 3,189 qrs. English, 154,449 qrs. foreign, against 11,709 qrs. English, 36,009 qrs. foreign in 1871.

During the earlier part of the month, when damp weather ruled, more English new beans than is usual were sent up to Mark Lane. Such samples were of course soft, and, with spring-like weather in the ascendant, they could not be sold without accepting lower rates, more especially as maize had become cheap. The decline in new has been fully 3s. per qr., mazagans being scarcely worth 32s., and other qualities in proportion. Foreign have also been very little in demand, and 1s. to 1s. 6d. lower. The London imports for four weeks have been 3,293 qrs. English, 4,550 qrs. foreign, against 3,219 qrs. English, 8,476 qrs. foreign in 1871.

Peas have also been so little in demand, that they also have fallen in a like proportion, dues not being worth over 33s., maples 37s., and the best boilers about 40s. The London imports for four weeks were 1,678 qrs. English, 562 qrs. foreign, against 1,396 qrs. English, 286 qrs. foreign in 1871.

With moderate imports, linseed has maintained its value; but cakes have been difficult to sell.

The cloverseed trade has been very inactive from the wetness of the ground, and high prices which were paid by importers, and the abundance of feeding stuffs and grass, has caused large losses on tares, which have fallen considerably.

CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.

		Shillings per Quarter.	
WHEAT, new, Essex and Kent, white,	.....	56	to 60
.....	.....	60	55
Norfolk, Lincolnsh., and Yorksh., red,	.....	60	55
BARLEY .....	.....	36	41
.....	.....	29	31
Grinding .....	.....	29	33
.....	.....	29	33
MALT, Essex, Norfolk, and Suffolk	.....	61	63
.....	.....	63	63
Kingston, Ware, and town-made	.....	61	56
Brown .....	.....	36	38
RYE .....	.....	28	32
OATS, English, feed 21 to 24,	.....	00	00
.....	.....	00	00
Scotch, feed .....	.....	22	24
Irish, feed, white	.....	27	30
.....	.....	31	32
Ditto, black .....	.....	31	32
BEANS, Mazagan .....	.....	36	44
.....	.....	32	33
Harrow .....	.....	45	50
PEAS, white, boilers,	.....	40	44
.....	.....	45	50
FLOUR, per sack of 280lbs., best town households	.....	40	44
.....	.....	37	38
Norfolk and Suffolk .....	.....	

COMPARATIVE AVERAGES.

Years.	WHEAT.				BARLEY.				OATS.			
	Qrs.	s.	d.		Qrs.	s.	d.		Qrs.	s.	d.	
1868...	40,896½	72	5		29,327½	43	4		11,336½	26	9	
1869...	62,220½	47	9		25,189	45	0		3,707½	27	9	
1870...	66,971½	41	9		31,817½	34	4		6,392½	21	1	
1871...	78,667½	54	7		33,193½	36	1		7,440½	25	7	
1872...	46,530	55	5		39,172½	37	7		6,356½	22	11	

BRITISH SEEDS.

Mustard, per bushel, brown	14s. to 16s., white 7s. to 8s. 6d.
Canary, per qr.	..... new 50s. 54s. old 52s. 54s.
Cloverseed, new red 80s. 110s.
Coriander, per cwt. 22s. 23s.
Tares, winter, new, per bushel 5s. 3d. 5s. 6d.

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1st Class—Not Hazardous	1s. 6d. per Cent.
2nd Class—Hazardous	2s. 6d. "
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BUILDINGS and MERCANTILE Property of every description in Public or Private Warehouses.—Stillers, Steam Engines, Goods in Boats or Canals, Ships in Port or Harbour, &c. &c., are Insured in this Office at moderate rates.

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THOMAS BIGG, Agricultural and Veterinary Chemist, by Appointment to his late Royal Highness the Prince Consort, K.G., Leicester House, Great Dover Street, Borough, London, begs to call the attention of Farmers and Graziers to his valuable SHEEP and LAMB DIPPING COMPOSITION, which requires no Boiling, and may be used with Warm or Cold Water, for effectually destroying the Tick, Lice, and all other insects injurious to the Flock, preventing the alarming attacks of Fly and Shab, and cleansing and purifying the Skin, thereby greatly improving the Wool, both in quantity and quality, and highly contributing to the general health of the animal.

Prepared only by Thomas Bigg, Chemist, &c., at his Manufactory as above, and sold as follows, although any other quantity may be had, if required:—

4 lb. for 20 sheep, price, jar included	£0 2 0
6 lb. 30 " " " " " " " "	0 3 0
8 lb. 40 " " " " " " " "	0 4 0
10 lb. 50 " " " " " " " "	0 5 0
20 lb. 100 " " " (Cask and measure included)	0 10 0
30 lb. 150 " " " " " " " "	0 15 0
40 lb. 200 " " " " " " " "	1 0 0
50 lb. 250 " " " " " " " "	1 3 6
60 lb. 300 " " " " " " " "	1 7 6
80 lb. 400 " " " " " " " "	1 17 6
100 lb. 500 " " " " " " " "	2 5 0

Should any Flockmaster prefer boiling the Composition, it will be equally effective.

MOST IMPORTANT CERTIFICATE.

From Mr. HERBPATH, the celebrated Analytical Chemist.—Bristol Laboratory, Old Park, January 15th, 1861.

Sir,—I have submitted your Sheep Dipping Composition to analysis, and find that the ingredients are well blended, and the mixture neutral. If it is used according to the directions given, I feel satisfied, that while it effectually destroys vermin, it will not injure the hair roots (or "yolk") in the skin, the fleece, or the carcase. I think it deserves the numerous testimonials published. I am, Sir, yours respectfully,

WILLIAM HERBPATH, SEN., F.C.S., &c., &c.,

To Mr. Thomas Bigg, Professor of Chemistry, Leicester House, Great Dover-street, Borough, London.

He would also especially call attention to his SPECIFIC, or LOTION, for the SCAB or SHAB, which will be found a certain remedy for eradicating that loathsome and ruinous disorder in Sheep, and which may be safely used in all climates, and at all seasons of the year, and to all descriptions of sheep, even ewes in lamb. Price FIVE SHILLINGS per gallon—sufficient on an average for thirty Sheep (according to the virulence of the disease); also in wine quart bottles, 1s. 3d. each.

IMPORTANT TESTIMONIAL.

"Scoulton, near Hingham, Norfolk, April 16th, 1855.
"Dear Sir,—In answer to yours of the 4th inst., which would have been replied to before this had I been at home, I have much pleasure in bearing testimony to the efficacy of your invaluable 'Specific for the cure of Scab in Sheep.' The 600 sheep were all dressed in August last with 84 gallons of the 'Non-poisonous Specific,' that was so highly recommended at the Lincoln Show; and by their own dresser, the best attention being paid to the flock by my shepherd after dressing according to instructions left; but notwithstanding the Scab continued getting worse. Being determined to have the Scab cured if possible, I wrote to you for a supply of your Specific, which I received the following day; and although the weather was most severe in February during the dressing, your SPECIFIC proved itself an invaluable remedy, for in three weeks the Sheep were quite cured; and I am happy to say the young lambs are doing remarkably well at present. In conclusion, I believe it to be the safest and best remedy now in use.
"I remain, dear Sir,
"For JOHN TNGEY, Esq.,
"To Mr. Thomas Bigg." "R. RENNEY.

Such Flockmasters would be well to beware of such preparations as "Non-poisonous Compositions;" it is only necessary to appeal to their good common sense and judgment to be thoroughly convinced that no "Non-poisonous" article can poison or destroy insect vermin, particularly such as the Tick, Lice, and Scab Parasites—creatures so tenacious of life. Such advertised preparations must be wholly useless, or they are not what they are represented to be.

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No. 5, VOL. XLI.]

MAY, 1872.

[THIRD SERIES.

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(As grown on the Prince of Wales's Farm for several seasons.)

Awarded the following amongst many other Prizes this season:—

- Egham, The Silver Cup
- Moreton, a Silver Cup and the First Prize.
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- Bandon, Two First Prizes.
- Marshland, the First Prize.
- Spaunton Manor, The First Prize.

From J. FORESTRIK, Esq., *Highgate Road, London, Oct. 18, 1871*:—"From your Mangel Seeds I have had the most regular and heaviest crop I ever grew and they are considered the heaviest crop in the neighbourhood."

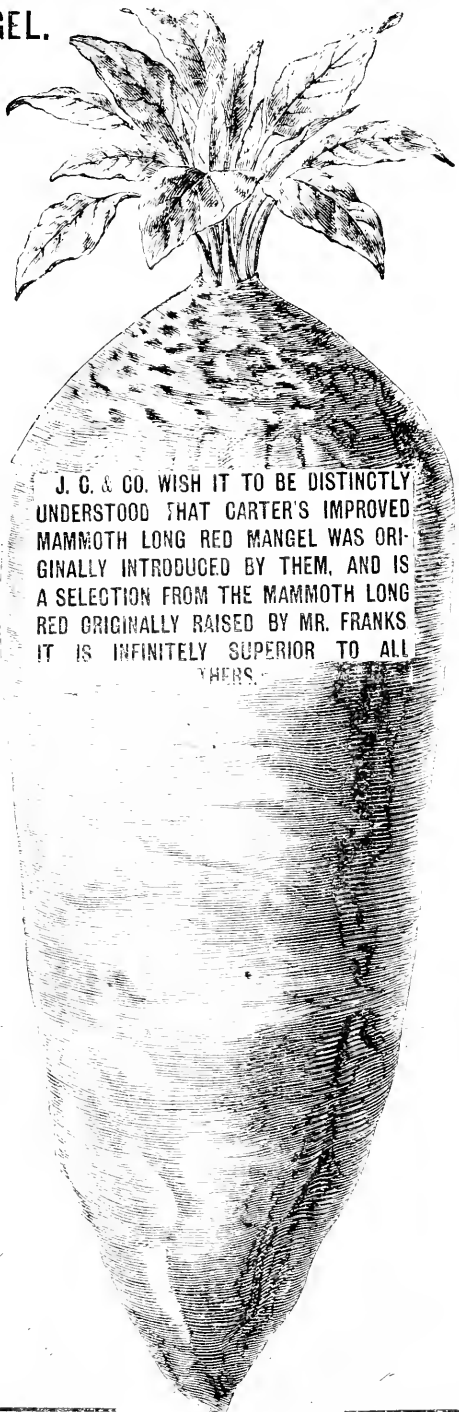
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For several years past we have exhibited at the annual Southfield Club Shows, some of the most magnificent specimens of Long Red Mangel ever seen, and notwithstanding the past unfavourable season for root crops, we this year exhibited any specimen exhibited with some of our Mammoth Prize Long Red Mangels, of a size and quality, which is a remarkable one for size and quality. This popular variety may now be considered perfect, and after some years of most careful selection, we have brought it to a standard of the highest excellence.



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CHOICE SELECTED STOCKS.

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|--|---------------|
| CARTER'S IMPROVED MAMMOTH PRIZE LONG RED MANGEL, a variety, from an inch and a half to an inch and a quarter size. (See <i>Illustration</i>) | 1 3 |
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| CARTER'S IMPROVED RED GLOBE, a very choice variety. | 1 0 |

Much cheaper per cwt.

Ordinary Stocks, 8d. to 1s. per lb.

CARROT.

*See *Illustration*, p. 10.*

- | | Per lb. s. d. |
|---|---------------|
| LARGE WHITE BELGIAN | 1 0 |
| YELLOW BELGIAN | 1 6 |
| LARGE ORANGE BELGIAN, a heavier cropper than the preceding, and more nutritious | 1 6 |
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Carter's New Blue Clover, see next page.

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Special Low Estimates for Large Quantities of Farm Seeds.

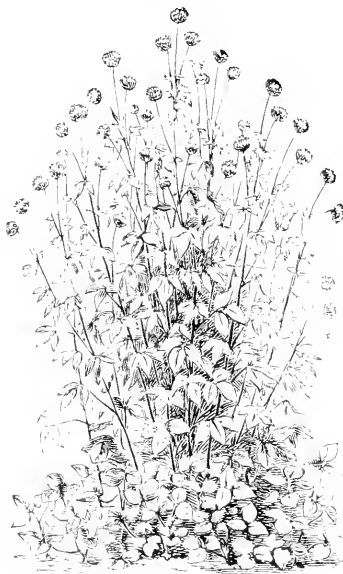
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CARTER'S NEW ANNUAL BLUE CLOVER.

WE have much pleasure in introducing for public trial this remarkable and valuable novelty, which we believe is destined to supersede to a great extent both Tares and Trifolium. Its rapid growth will be best understood when we state that, during the past inclement season, seed sown in Yorkshire by T. C. Booth Esq., of Warlaby, on May 21st, produced a crop over 3 feet long by August 2nd! Specimens of this astounding growth were exhibited by us at the last great Yorkshire Agricultural Show in York during the month of August of last year, together with an equally remarkable specimen contributed by W. S. Thompson, Esq., of Kirby Hall, York. This latter gentleman assures us that he has tried every kind of stock with it, and finds that all eat it readily. It must prove a great acquisition as an auxiliary to the Clover crop, as it can be sown in the spring to fill up where the previous season's sowing of Clover has missed, and will then produce an immense swarth, ready for cutting with the general crop.



Per $\frac{1}{4}$ lb. packet, 7s. 6d.

Post free.

C. WHITEHEAD, Esq., Farming House, Maidstone, says:—"I consider Messrs. Carter's New Annual Clover to be a valuable plant to supply the place of red or other Clover that has failed from the heaviness of the Corn crop with which it had been sown, from the drought of autumn, or the severity of winter, or the many causes which now make this crop so precarious and uncertain. It may be used either as a substitute for the whole Clover crop, where it has been seen in March or April that it has entirely failed, or it may be sown with advantage upon the bare places when the Clover plant is patchy. It is of very rapid growth, and if sown late in March or early in April, will, with favourable weather, come to cut for hay in the second or third week in July. There is no doubt that it is a very valuable addition to the forage plants of this country.—August 14, 1871."

WE BELIEVE CARTER'S NEW BLUE CLOVER WILL PRODUCE A VALUABLE SECOND CROP OF HERBAGE FOR GRAZING.

The following reports reach us from Members of the Council of the Royal Agricultural Society of England, to whom we sent samples of our New Blue Clover in the spring of 1871 for trial:—

From Mr. GEO. TAYLOR, Bailiff to the Right Hon. Lord Evelyn. "Home Farm, Hockley, July 11, 1871.—I send you the result of the trial of Blue Clover seed you sent me in the spring. Sown April 9th, cut July 14th; height of stem, 1 foot 5 inches; weight of green food, 24 pounds; quantity of food, 20 square feet. The crop is certainly splendid for the short time in growing."

From T. C. BOOTH, Esq., Warlaby, Jan 17, 1871.—The Blue Clover was sown on the 21st of May, and you will find some statistics in the bundle I have sent you 1 foot 6 inches long."

From CHAS. BARNETT, Esq., "Shotton Park, Aug 12, 1871. The Blue Clover was sown March 22nd in rows 3 inches apart, on fine gray soil in high condition and top-dressed with farm manure. It grew very strong, I cut it July 25th, and gave some to horses, cattle, sheep and pigs, and all seemed to like it particularly the horses."

From Mr. F. A. GOWING, Bailiff to the Right Hon. Lord Beacons. "The Farm, Tully, Aug 12, 1871. Your Blue Clover was sown the last week in April and by the 1st of August averaged about 2 feet 6 inches in height. My opinion is that it will grow an immense weight of fodder per acre."

"11, SALISBURY SQUARE, FLEET STREET, Jan. 27, 1872

"1. Detailed composition of Carter's New Blue Clover.

"The following analysis expresses the composition of a sample of Carter's Blue Clover in an arid condition which was analysed and sent to me by Mr. Dove, of Leamington:—

"1. General composition of Carter's New Blue Clover.

Moisture	10.09
Soluble organic matter	24.09
Insoluble organic matter	53.8
Soluble mineral substances	9.33
Insoluble mineral substances	2.00
	100.00

Water	10.69
Oil and fatty matter	1.65
Soluble albuminous compounds	9.53
+ Insoluble nitro-genous compounds	5.94
Sugar, amylaceous and similar soluble non-nitrogenous compounds	13.49
Digestible fibre	14.97
Woody fibre (cellulose)	33.90
Soluble saline matters	9.43
Insoluble mineral matters	2.00
	100.00

"In addition to these constituents the Blue Clover contains a volatile aromatic principle, which gives a peculiar and agreeable taste to the Clover, and which renders it a valuable for mixing as cut hay with straw, chaff, or similar insipid feeding materials. The Blue Clover, I believe, will be found a good and useful article of food, and advantage may be taken of its aromatic taste to render straw and chaff more palatable and probably more digestible. Carter's New Blue Clover, both in a green state and as hay, I have no doubt will be much relished by sheep and cattle."

"Signed, AUGUSTUS VOELCKER."

We regret that the stock of this seed being very limited, we are unable to supply larger quantities than $\frac{1}{4}$ lb. packets for trial. Price 7s. 6d. per packet.



JAMES CARTER & CO.,

Seedsmen to the Queen and the Prince of Wales,

237 & 238, HIGH HOLBORN, LONDON, W.C.



For full Descriptions, see

Special Low Estimates for Large Quantities of Farm Seeds.

Five per Cent. Discount for Cash.

CARTER'S PRIZE-MEDAL GRASS SEEDS,

As Supplied to

THE QUEEN & THE PRINCE OF WALES.

The United States Government.

Her Majesty's Defences.

The War Department. The Crystal Palace.

Aldershot Camp. Lord's and The Oval.

Christchurch College, Oxford, &c.

EVIDENCE OF QUALITY.

From Messrs G. & J. PERRY, *Acton Pinnett*:—"The Permanent Grass Seeds we had from your firm in the spring are a thick regular plant, and appear to be a superior mixture."

From J. G. BURCHAM, Esq., *Husham Lynn*:—"The Grass Seeds I had of you 2 years since for 3 years lay, are admirable, and continue to produce me wonderful crops, paying better than Corn."

From Colonel VARIAN, R.E., *Aldershot Camp*:—"Colonel Laffan presents his compliments to Messrs C & Co., and is supplied by them to the War Office, for use at Aldershot last year, have succeeded admirably. Last year a very good crop of excellent hay was produced on what had previously been a barren sand."

CARTER'S GRASS SEEDS FOR PERMANENT PASTURES.

CAREFULLY ARRANGED TO SUIT THE VARIOUS CONDITIONS OF SOILS.

		Per Acre.
FOR LIGHT SOILS ..	} Carriage free.	30s. to 32s.
FOR MEDIUM SOILS ..		30s. to 32s.
FOR HEAVY SOILS ..		30s. to 32s.

Reduced rates for more than 10 acres.

Second Quality, 22s. to 28s. per acre.

CARTER'S RENOVATING MIXTURE FOR RENEWING AND IMPROVING OLD GRASS LANDS Per cwt 86s.; per lb. 10d.

This will wonderfully increase the Hay crop.

CARTER'S MIXED GRASSES AND CLOVERS FOR ALTERNATE HUSBANDRY.

To Lay Down One, Two, Three, or Four Years in Grass.

Per acre—s. d.

CLOVERS AND RYE GRASS, to lay one year. Comprising 14lbs. Clover and 1 peck Rye Grass 14 0

CLOVERS AND MIXED GRASSES, to lay one year. Comprising Red Clover, White Clover, Trefoil, Cocksfoot, Perennial and Italian Rye Grass, &c 15 0

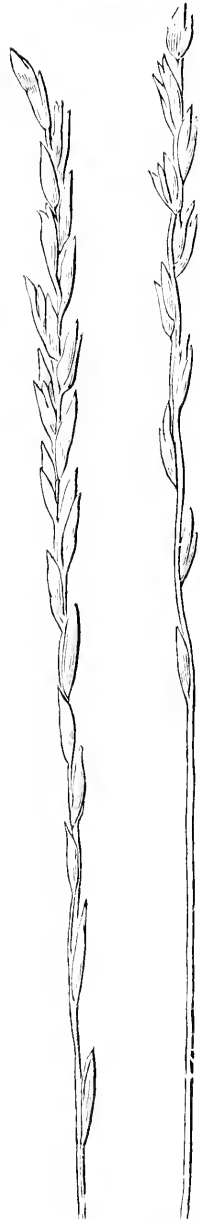
CLOVERS AND MIXED GRASSES, to lay two years. Comprising Red Clover, White Clover, Alsike Clover, Trefoil, Cocksfoot, Timothy, Italian and Perennial Rye Grass, &c 18 6

CLOVERS AND MIXED GRASSES, to lay three or four years. Comprising Red Clover, White Clover, Trefoil, Alsike Clover, Cow Grass, Sheep's Fescue, Cocksfoot, Meadow Fescue, Perennial and Italian Rye Grass, Meadow Foxtail, Timothy, Sweet Vernal, &c .. 24 0

MIXED CLOVER SEEDS ONLY, to lay one year 13s. to 14 6

We can supply Inferior Mixtures at Lower Rates.

Before Ordering Grass Seeds, send for CARTER'S ILLUSTRATED FARMERS' CALENDAR for 1872, containing an epitome of the various soils prevailing throughout the country, with reliable information as to How to Sow, What to Sow, and When to Sow.



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Carter's Illustrated Farmers' Calendar.

All Seeds Carriage Free.

CARTER'S PRIZE SWEDE AND TURNIP.

Seedsman to



The Queen.

CARTER'S IMPERIAL HARDY SWEDE.

1s. per lb. Awarded the following amongst many other Prizes *Chaque par cult*
this season:

Egham, Silver Cup.—Bandon, First Prize.—Marshland, First Prize
Moreton, First Prize.—Lunesdale, Silver Cup.—Temple Sowerby, First Prize.
Burton and Milnthorpe, First Prize.—Croydon, First Prize.
Also, Five First and Five Second Prizes at Canadian Agricultural Meetings.

Seedsman to



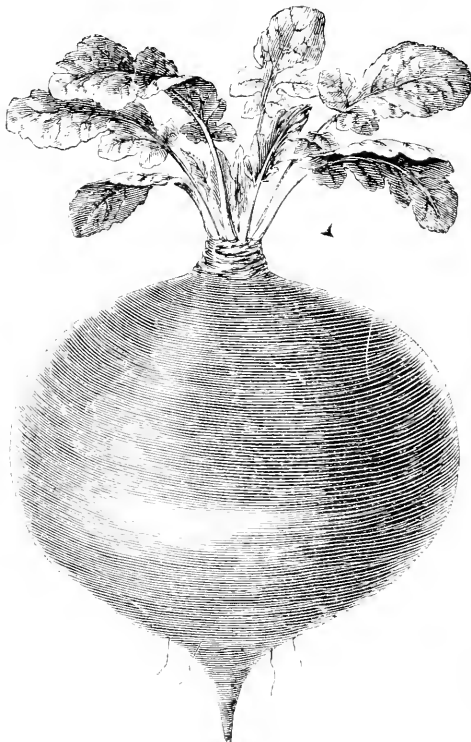
The Prince of Wales.

From

R. ORMEROD, Esq.

"*Arkenhoite*,
"Nov. 11, 1871

"I have much pleasure in handing you a statement of the prizes taken by the roots from the Carter's Imperial Swede seed I purchased from you in September, 1870. First Prize to £10 10s. cup at the Lunesdale Agricultural Society; First Prize at the Temple Sowerby Agricultural Society; First Prize and High Commended at the Burton and Milnthorpe Agricultural Society; and Second Prize at the Bentham Agricultural Society."



From

MR. E. SARNEY.

"*Bolton Park Farm*,
"Nov. 20, 1871.

"The Swede seed I received I am happy to inform you has produced an excellent crop, being large and very handsome, and I believe from their appearance they will withstand a great amount of frost without receiving damage. I hope to have some more of you another year."

From

EDWARD CRAIG, Esq.

"*The Ghyll*,
"Nov. 6, 1871.

"I have great pleasure in stating that the Turnips grown from your seed this season have obtained several first class prizes."

SWEDE. Choice Selected Stocks.

CARTER'S IMPERIAL HARDY (see <i>Illustration</i>), a handsome Swede with small neck, grows to a great size and is of fine quality.....	1 0	CARTER'S LONDON PURPLE TOP.....	1 0
		HALL'S WESTBURY, a good Swede.....	1 0
		SKIRVING'S IMPROVED PURPLE TOP, grows to a large size.....	0 10

TURNIP. Choice Selected Stocks.

CARTER'S CHAMPION GREEN-TOP YELLOW HYBRID, the best.....	1 0	CARTER'S DEVONSHIRE GREY STONE.....	0 10
CARTER'S CHAMPION PURPLE-TOP YELLOW HYBRID, very choice.....	1 0	CARTER'S IMPROVED PURPLE TOP MAMMOTH.....	1 4
DRUMMOND'S EARLY FIELD YELLOW, a small, quick growing green-top yellow	1 0	LINCOLNSHIRE RED GLOBE.....	0 10
ROBINSON'S GOLDEN BALL OR ORANGE JELLY, a very fine stock	1 2	HEANLEY'S LINCOLNSHIRE WHITE GLOBE.....	0 10
CARTER'S EARLY NIMBLE OR SIX WEEK	1 0	POMERANIAN WHITE GLOBE.....	1 0
		IMPERIAL GREEN GLOBE.....	0 10

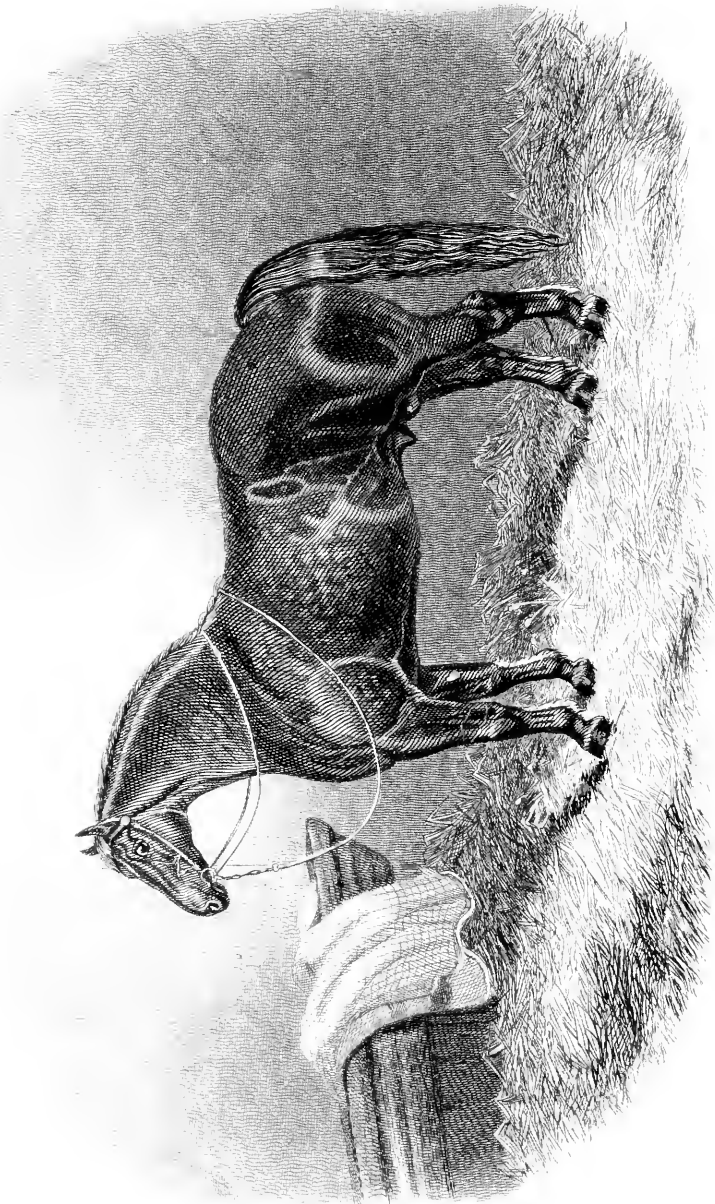
Ordinary Stocks, 9d. to 1s. 4d. per lb.

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Special Low Estimates for Large Quantities of Farm Seeds.



Comptoir



THE FARMER'S MAGAZINE.

MAY, 1872.

PLATE I.

CUPBEARER; A "ROYAL" SUFFOLK STALLION.

THE PROPERTY OF MR. RICHARD GARRETT, OF CARLTON HALL, SAXMUNDHAM.

Cupbearer, bred by Mrs. Sargent, at Marlesford, in 1864, is by Crisp's Conqueror, dam by Crisp's Prince. Conqueror by Crisp's Boxer (a son of Catlin's Beeden), dam by Crisp's Captain, won 9 prizes, and was then sold to the King of Prussia for 300 gs. Prince, a winner of 3 prizes, was by Catlin's Captain.

Cupbearer was bought when he left the mare's foot by that good all-round judge the late Mr. Tom Crisp for under £20, and of course soon made his appearance in public, with the subjoined result :

In 1866, as a two-year-old, at the Suffolk Agricultural Association's meeting at Bury St. Edmund's, he won a cup, value 20 gs., as the best stallion for agricultural purposes, and a prize of £5 as the best two-year-old Suffolk cart colt; at the Essex Agricultural Society's meeting at Epping, the Champion prize of £30, open to the world and against horses of all breeds and ages, and a prize of £10 as the best two-year-old cart colt.

In 1867, as a three-year-old, at the Essex Agricultural Society's meeting at Braintree, the open county prize of £25, and the prize of £30 open to the world; at the Norfolk Agricultural Association's meeting at Fakenham, a prize of £10; at the Royal Agricultural Society of England's meeting at Bury St. Edmund's, a special prize of £20 for three-year-old colts.

In 1868, as a four-year-old, at the Essex Agricultural Society's meeting at Chelmsford, the town prize of £20 open to the world; at the Suffolk Agricultural Association meeting at Framlingham, first prize of £10; at the Royal Agricultural Society's meeting at Leicester, a third prize of £5.

Cup-bearer was not exhibited in 1869 or 1870, and in 1869, consequent on the death of Mr. Crisp, he was sold at the Butley Abbey sale to Mr. Richard Garrett for 370 gs.—the highest price ever given for a Suffolk horse.

In 1871, at Woodbridge, he won the eup, value 10 gs., for the best Suffolk cart stallion; at the Suffolk Agricultural Association's meeting at Beeceles, the first prize of £20 as the best Suffolk cart stallion, the President's eup of 25 gs. as the best Suffolk cart stallion of any age, and the Beeceles cup of 10 gs. as the best cart stallion of any breed; at the Royal Agricultural Society's meeting at Wolverhampton, the first prize of £25.

Cup-bearer is of course a chesnut, but of a very hardy colour and full of muscle, with great depth on a short leg, and plenty of bone. He has a capital head and neck, with well laid shoulders, a short back and powerful drooping quarters. He has a fine temper, stands over a deal of ground, and moves like a pony.

As a matter of justice, the more especially as a report of the Stowmarket meeting has appeared in *The Farmer's Magazine*, we give the following letter, to which, so far, no reply has been received :

TO THE EDITOR OF THE SUFFOLK CHRONICLE.

SIR,—At the Stowmarket Farmers' Club last week, Mr. Woodward stated that he had put six mares to Cupbearer last year; I think it my duty to inform the public that Mr. Woodward has not employed the horse since Mr. Garrett bought him in 1869. Cupbearer's character as a sire may be left in the hands of those who use him, in proof of which he will travel the same rounds this year as he did last.

I am, sir, yours respectfully,

JAMES LEWIS, groom.

Brook Farm, Carlton, Feb. 27.

PLATE II.

THE FARMERS' FRIEND.

The terrier is a deadly foe to vermin. I am well aware that he is as pure as we can get him with mettle, and that many of those which are denounced as made up of Italian greyhound cross will destroy rats, or attack the badger and otter; but a slight infusion of bull-blood gives this advantage. The terrier will destroy or attack when he is set on; but frequently shut him in a barn by himself, and he will let the rats run under his nose. On the other hand, the bull-terrier running loose—as he ought to be—about the premises will be constantly on the look-out for his small game, and nothing in the shape of vermin can go abroad. He has been bred for many

years originally to tackle the polecat, the marten, or the otter, and to go to ground and engage the attention of the badger, as they dug him out. From the wild cat, he was set by the roughs of the day to bait tame cats; and it used to be, and perhaps still remains so, a strong commendation to say of one that he would kill a cat in a minute. He is an admirable water-dog in the summer; but if he has a fine coat, and is highly-bred, he frequently pays the penalty of disease or death if used indiscriminately amongst ice and in cold winds, though his courage will certainly induce him to take all risks of rheumatism or death.—“*Idstone*” on *The Dog*.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: Wednesday, April 10.—Present: Mr. Thompson, Trustee, in the chair; the Earl of Leicester, the Earl of Lichfield, Major-General Viscount Bridport, Lord Chesham, Lord Tredegar, the Hon. H. G. Liddell, M. P.; Sir Massey Lopes, Bart, M. P.; Sir A. K. Macdonald, Bart.; Mr. Barthropp, Mr. Bowly, Mr. Cantrell, Colonel Challoner, Mr. Davies, Mr. Dent, M. P.; Mr. Edmunds, Mr. Brandreth Gibbs, Mr. Hornsby, Colonel Kingscote, M. P.; Mr. Leeds, Mr. McIntosh, Mr. Milward, Mr. Pain, Mr. Randell, Mr. Ridley, M. P.; Mr. Rigden, Mr. Shuttleworth, Mr. Torr, Mr. George Turner, Mr. Wakefield, Mr. Welby, M. P.; Mr. John Wells, Mr. W. Wells, M. P.; Mr. Whitehead, and Dr. Voelcker.

The following new members were elected:—

Bakewell, Charles Henry, Quarndon, Derby.
 Benjafield, N., Motcombe, Shaftesbury.
 Boulton, W. S., Rose Lane Works, Norwich.
 Carver, Richard R., Wenall, St. Clears.
 Charlton, Thomas, Newland, Middlesborough.
 Currey, Charles Herbert, Weybridge, Surrey.
 Davies, Thomas, Parkypratt, near Cardigan.
 Davies, Thomas, Ystradwalter, Llandoverly.
 Davis, J. Jeffries, Bickmarsh, Alcester.
 Gwyn, W. E. B., Plas Cwrt Hyr, Carmarthen.
 Haines, Philip, Palgrave, Diss.
 Hartrry, David, Newport, Monmouthshire.
 Heywood, Major J. H., Crosswood, Welshpool.
 Homfrey, W. H. Wickey, Glensno, Carleon.
 Howes, James, Chapel Field, Norwich.
 James, John, Aberclyn, Brecon.
 Jones, John, Tuffley, Gloucester.
 Lee, Charles, Bramfield, Saxmundham.
 Newton, William, Gould's Grove, Benson, Oxon.
 Owen, Daniel, Ash Hall, Cambridge.
 Paget, Edward, Burnett, Bristol.
 Palling, John George, Castleon, Cardiff.
 Porter, William, Kencott, Lechlade.
 Powell, D. J., The Court, Broullys, Talgarth.
 Pullen, Samuel Cox, The Laurels, Ithington, Alveston.
 Parkin, Thomas, Cardigan.
 Reece, Richard Lewis, Cardiff.

Rees, John, Tile House, Lanmaes, Cowbridge.
 Rees, John, Hendre, St. Dogmells, Cardigan.
 Rees, Valentine, The Ivy Bush Royal Hotel, Carmarthen.
 Roberts, W. B., Lovestone, Pembroke.
 Roper, R. S., Newport, Monmouth.
 Sadler, James H., Purton Court, Purton, Wilts.
 Smith J., Jeffreston, Wortley, Sheffield.
 Surman, William, Maisemore, Gloucester.
 Talbot, George W., Maryborough, Queen's County, Ireland.
 Thomas, David H., Derllys Court, Carmarthen.
 Welch H. J., Bendysh Hall, Radwinton, Saffron Walden.
 White, Edwin, Maisemore, Gloucester.
 Wooler, William A., Sadberge Hall, Darlington.

FINANCES.—Major-General Lord Bridport (chairman) presented the report, from which it appeared that the secretary's receipts during the past month had been duly examined by the committee, and by Messrs. Quilter, Ball, and Co., the Society's accountants, and found correct. The balance in the hands of the bankers on March 31 was £556 15s. 11d., and £2,000 remain on deposit. The quarterly statement of subscriptions and arrears to March 31, and the quarterly cash account were laid on the table; the amount of arrears being £896. The committee recommended that the names of 25 members whose subscriptions are in arrear be struck off the books.—This report was adopted.

JOURNAL.—Mr. Thompson (chairman) reported that the committee had examined and passed, and recommended for payment, the bills for the last number of the *Journal*. It was also reported that the committee would ask the Council to authorise the expenditure of a sum not exceeding £100 in obtaining a paper by the secretary on foreign agriculture, the precise district to be visited, with other details, to be laid before the Council in May, when a grant of the money will be moved for. This report was adopted, after a conversation, in the course of which Mr. Thompson stated his opinion of the desirability of obtaining reliable reports on such departments of foreign

agriculture as bear on questions likely to come prominently before the public. Mr. Liddell concurred in this view, and suggested Prussia as a country worth reporting upon at an early date, its agriculture being frequently quoted as having progressed in consequence of a relaxation of the laws of settlement and entail. Mr. Dent mentioned that the committee had not agreed upon any plan; and Mr. Randell assured the Journal Committee of the desire of the Council to support any plan that they might decide to bring forward.

CHEMICAL.—Mr. Wells, M.P. (chairman), reported that an explanatory letter had been received from Messrs. Bravener and Walker, in reference to a sample of liuseed-cake reported upon in the last quarterly report of the committee. The committee recommended that Messrs. Bravener and Walker's explanation should be published in the report of the proceedings of the Council.—This report was adopted.

To the Council of the Royal Agricultural Society of England.

47, High-street, Hull, March 18, 1872.

My Lords and Gentlemen,—Having read in the *Mark Lane Express* a report of your meeting of March 6, at which certain statements were made that have greatly damaged our business reputation, we trust you will excuse us for troubling you with the facts of the case. We allude to the matter of Mr. Chas. O. Eaton, of Toletorpe Hall, and in doing so we submit that in common fairness a gentleman, before making such a statement as this in public, ought to have written to us first for an explanation. If he had done so he would have found that our part in the transaction was perfectly fair and honest. Mr. Eaton states, "I do not know who made the cake, but it was sold by Bravener and Walker, oilcake, seed, and corn merchants, 47, High-street, Hull, and sold by their agent at Stamford at a very small profit to himself of £11 10s. per ton."

The truth is, we have no agent at Stamford, but sold cakes to Mr. J. R. Dalton, Chemist and Druggist, High Street, Stamford, and he distinctly understood they were a mixed cake, because we gave him the brand at time of sale, and sent him a sample cake for approval. He had in all from us 20 tons of the same cakes, some in August, and some in October, therefore he could not be ignorant of the quality in December. We never for a moment led him to suppose the cake was pure, indeed, any man in his senses could not think so when we state that we sold it to him at £8 12s. 6d. per ton, less two months discount 1s. 5d., leaving net amount received by us £8 11s. 1d.! This shows how grossly unfair it is to us to say that at a "very small profit" to himself he charged Mr. Eaton £11 10s. per ton. After this what will he admit to be a large one? We as dealers should be glad indeed if nothing but a pure cake could be made and sold. Farmers are greatly mistaken in supposing we have any special reasons for selling common cakes our profit is the same, and we should always advise them to have the "pure." Respecting the death of the cow, the crusher assures us that nothing but good feeding stuff was put in the cake; but be this as it may, it only seems reasonable to suppose that after the many tons he has sold of it and never having received any other complaint, that it did not kill the cow.

My Lords and Gentlemen, we appeal to you for the sake of justice and fair play, that you will do all you can to vindicate our character through the same channel that you have been the means of injuring us.—We are your obedient servants,

BRAVENER AND WALKER.

GENERAL, CARDIFF.—Mr. Randell reported that the committee recommended placards being printed announcing the times for sending in entries for the exhibition of stock and implements, which the Mayor of Cardiff will have posted in the different towns of South Wales; that

the draining and levelling of the showyard is in progress, and will be completed by the local authorities; and that the Mayor of Cardiff be requested to arrange with the railway authorities, if possible, for the conveyance of stock and implements to the showyard over the siding to be constructed by the Taif Vale Railway Company.—This report was adopted.

BOTANICAL.—Mr. Welby, M.P. (chairman), reported the recommendation of the committee that the Consulting Botanist inform members of the Society sending samples for examination that his communications must be considered confidential; and that the *Journal* of the Society be sent to the Consulting Botanist.—This report was adopted.

EDUCATION.—Mr. J. Dent Dent, M.P., reported that the committee had received a letter from the Rev. Mr. Constable, Principal of the Royal Veterinary College, expressing his regret that nine candidates from the college had not been entered for the examination at the proper time and requesting that they might be examined for the Society's prizes and certificates. The committee considered that to allow these candidates to compete for prizes would be unfair to those who had already entered; but they recommended that those gentlemen be allowed to be examined for the Society's diploma and life membership, as is the case with those whose entries were correct, but who are more than 21 years of age.—This report was adopted.

JUDGES SELECTION.—Mr. Milward (chairman) presented the report of this committee, consisting of the list of judges of stocks and implements nominated for the Cardiff meeting.—This report was adopted.

SHOWYARD CONTRACTS.—Mr. Randell (chairman) reported that the showyard works are in progress, and that the necessary draining and levelling are being done by the local authorities. The committee recommended the preparation of a plan and estimate for the erection of a stand on each side of the horse-ring at Cardiff sufficient to accommodate 500 persons; also that the plan of continuous stables be adopted for all classes of horses, instead of horse-boxes as heretofore; and that the surveyor be instructed to order the making of the roads to the entrances required within the walls of the show-ground.—This report was adopted.

VETERINARY.—Major-General Viscount Bridport (chairman) reported that a communication had been received from the Principal of the Royal Veterinary College, stating that he had been authorised by the governors to nominate at any time, on application from the Society, a Professor of the College to act as the Veterinary Inspector of the Society. The proposed scheme of veterinary privileges is still under the consideration of the governors of the Royal Veterinary College.—This report was adopted.

Memorials were received from the authorities of Darlington, Hull, and Newcastle, inviting the Society to hold its country meeting for 1873 in those localities, and an inspection committee, consisting of the President, the honorary director, Mr. Milward, Mr. Randell, and Mr. Shuttleworth was appointed to inspect and report upon the accommodation offered.

THE FARMERS' CLUB.

VEGETABLE AND FRUIT FARMING.

The monthly meeting took place on Monday evening, April 1st, Mr. H. Cheffins in the chair. The subject appointed for consideration was Vegetable and Fruit Farming, the introducer being Mr. T. C. Scott, of Knaphill, Woking.

The CHAIRMAN, in opening the proceedings, after expressing his regret that, owing to the engagements of the Easter holidays, the attendance was not so large as usual, said he regretted that the more because the subject before them was a very interesting one. Let them travel which way they would now-a-days, they saw garden-farming becoming a very prominent object (Hear, hear); and he felt sure that Mr. Scott would introduce that question with a very good paper.

Mr. SCOTT then spoke as follows:

Gentlemen,—The subject we have for consideration to-night is one of more limited interest than those usually discussed by the members of this Club, but it is of growing importance to the owners and occupiers of land fit for market-gardening within reach of populous centres, because they must always possess some advantage in the sale of the heavier and more perishable kinds of fruits and vegetables, and in obtaining abundant supplies of that indispensable but unwieldy commodity, solid manure. These, however, are almost the only local advantages which suburban lands now possess, for steam transport, both by land and water, may be said to have obliterated distance, and bring supplies from every recess in our own country and from others. Thus we have in January, February, and March cauliflowers and potatoes from Cornwall, Holland, Belgium and France, and even from Portugal and Spain, grown in the open air and rivaling our hot-house productions. When turnpike roads were the only means of conveyance, land around large towns had a species of monopoly in the supply of vegetables, and much ordinary land was forced into market-garden cultivation; but now it is *soil and climate* that has the monopoly, and some of these grounds must be dropped out of the market-garden category and revert to ordinary farm uses and rents, otherwise the perverse cultivators will come to grief, as many did last year to my own knowledge, when wholesale prices obtained for almost everything grown, except apples and asparagus, were nearly nominal. It thus appears indispensable to success to secure a congenial soil irrespective of locality, otherwise no cultivator of the present day can hope to obtain any but the most ordinary returns for his constant anxieties, midnight labours, and the speculative risks he runs. A few years ago a gentleman with whom I am acquainted commenced market gardening on 700 acres of a medium soil—shallow drift on a subsoil of estuary gravel and London clay—simply because it was within carting distance of the metropolis; but as he had not the natural basis to work upon, a few years' experience, has induced him to reduce the area so cultivated to one-third the original quantity. Another gentleman with whom I am acquainted, who farms an equal quantity of land only a few miles off, and possesses the right basis, namely, a deep alluvial soil, not only competes successfully with all comers in the London markets, but last year performed the astounding feat of competing successfully with the midland counties and

northern growers in their own markets, as far north as Glasgow, to which he sent 60 per cent. of his early produce, and from which, notwithstanding the Irish supplies, he obtained the most profitable returns. When I add that this congeniality of soil is annually assisted by nearly 20,000 tons of purchased manure, including the peculiar ingredient "ground whalebone," this successful invasion of the north will be accounted for. Again, in Lincolnshire, around Boston, Spalding, and in other districts, orchards and market-gardens are springing up, not because they are near populous centres of consumption, but because they possess rich loamy soils and subsoils suitable for the production of fruit and vegetables. Then, if we go further afield, we find the otherwise worthless sand banks on the Cheshire shore opposite Liverpool let at from £15 to £20 an acre, because they have been found suitable for the production of early potatoes, which are thus grown: The potato-sets are kept in warm places during winter, to induce them to shoot, and in the months of March and April they are planted, generally in lazy beds, well manured, and covered lightly with soil by the spade, and with litter on the surface. They are thus covered and uncovered daily until safe from frosts; and so watchful are the growers—who are a distinct and peculiar class—that if during this time a dangerous frost threatens, they are said to take the blankets off their children to put them on the potatoes. In May they begin to dig, and sell at 2s. 6d. per lb., and finish at about 3d., thus realizing from £50 to £100 per acre; and from having resided several years in the county, and seen the care and labour bestowed upon the crop, I must say the cultivators deserve the reward they obtain. Another proof of the predominating importance of natural soils as the basis of successful results over artificial condition, is the case of Mr. Wm. Thomson's great Tweedside vineyard, near Galashiels, in Selkirkshire. When in charge of the Dalkeith Palace Gardens, Mr. Thomson was frequently called upon to act as judge at horticultural shows; and finding one grape-grower always coming to the front and taking the first prizes, he was induced to visit the locality and inspect the soils from whence they came; and finding some land of precisely similar character in the immediate neighbourhood, he purchased it, and established the above-named vineyard. It occupies nearly 4 acres, and is covered with 50,000 feet of glass, has miles of hot-water piping, and other necessary appliances, and is calculated to produce tons of grapes, hundreds of pine-apples, and thousands of pot-vines annually. When selected, this land was devoted to common farming purposes; but it has already produced grapes which have competed successfully in London and Paris, thus showing that the soil itself contains some inherent qualities which no art can rival. *Appropos* to grape-growing, I have seen many evidences that a water-bearing substratum within reach of the vine-roots is a source of constant fertility, provided the water belongs to a running stream and is not stagnant. The productiveness of the great Black Hamburg at Hampton Court is no doubt due to the Thames. On the banks of the Stour, in Kent, I have

seen the same results, and perhaps Mr. Thomson's success may also in some measure be due to his proximity to the Tweed. The geology of gardening is thus shown to be worthy of study, especially in the formation of new grounds. In a few cases indigenous plants may be some indication as to what species to grow, but experience is the only sure guide. From experience we learn that fruit may be grown on some soils if grafted on to an indigenous tree, quite different to what it would have grown on its own stem, and the produce of trees on some soils is quite different to what it is on others. In the cider countries quite different cider is made from apples of the same kind grown on different parts of the same farm, showing the predominating influence of soil. Even the market-garden grounds around London, although apparently so similar, have all their specialities. Fulham and Isleworth are famed for the finest fruit of asparagus and rhubarb, interspersed with countless moss-roses and flowering plants. Bermondsey and Deptford are noted for seakale and celery; Barking for rhubarb, early cabbages, onions, and potatoes; and all other districts throughout the country have some specific natural properties which no art can impart. Nature, too, has favoured some districts with climate, to rival which by artificial means is a very uphill and profitless undertaking. Witness the early products of Cornwall and the Channel Islands in the London markets; and the success of the consignments to Glasgow I have already mentioned, and which was no doubt owing to their forestalling the northern growers, perhaps only by a few days, but still showing the advantage of earliness in vegetable production and the levelling influence of railways. Around London there are about 12,000 acres devoted to market gardening, and 6,000 to orchards intermixed with vegetables and flowers; for although it is not the practice in the cider and perry districts to cultivate the orchard ground, it is in those around London. About 40,000 hands are irregularly employed upon these grounds. On the chalk formations around Mitcham, Carshalton, and Epsom there are about 500 acres devoted to the production of herbs, of which lavender is the principal. These crops bring in from £20 to £30 an acre annually, although the land on which they grow is not worth more than 30s. an acre for any other purpose. The returns from the suburban market gardens are sometimes very large and remunerative, arising more from the enormous crop the land is made to produce than from high prices. In a very productive year prices are usually low, and when there is only a partial crop foreign supplies of fruit and vegetables—all of which come in duty free—keep down the prices. The only protection that native growers now have is to produce abundantly, and keep down the cost of production. Most of their grounds are managed with such consummate skill and industry, that to offer a suggestion would appear almost like presumption, but I will venture to offer one or two. From excess of ammoniacal manure a good many of their crops, both bulbous and brassica, run more to top and leaf than to root and head, than is profitable. The brassica tribe are also subject to eubbing, and the surface of the ground to be infested with chickweed. Now the whole of these drawbacks can be remedied by the application of mineral manures, bone-dust, and superphosphate of lime, and that inexpensive article, gypsum. Last year I tried what the effect would be of London dung applied at the rate of 100 tons an acre on deeply trenched land, on which I planted Bovinia potatoes 6 feet apart each way; long and Globe mangold, Swedish, yellow and white turnips, white and red carrots, parsnips, cabbages and maize, at pro-

portionately wide distances, and the result was a total failure in every case except the maize, which reached eight feet in height and was well podded. On another piece of garden ground, trenched two spits deep, and manured from the farm-yard and dusted at the rate of five cwt. per acre with dissolved bones, I dug Bovinia potatoes at the rate of two ewt. per perch, or sixteen tons per acre, and some of the tubers weighed 3lbs. 14oz. each, and many of them 2½lbs. and 3lbs. I would also suggest to economize the valuable orchard grounds around London, which are being gradually curtailed by buildings and railways, that the French espalier system of training fruit-trees should be adopted, and likewise dwarf or bush fruit trees planted. The latter in windy places are invaluable and the fruit can be gathered with little labour or expense. In forming new orchards and gardens it is not only necessary to select the best species, but to propagate from the most vigorous and productive parent plants. This is as beneficial in the vegetable as in the animal world, for like produces like, and establishes what may be called pedigree plants. Thus the late Mr. Circuit's celebrated "Sovereign" rhubarb arose from one root which he espied in another man's field and tempted him to sell for the sum that gives the plant its name. Fortunes have been made out of this one root, and one of the largest growers informed me that he began by planting an acre of it at a cost of £120, and found it pay. Rhubarb, like potatoes, can be propagated from the seed, but, like them also, it may throw twenty kinds of rhubarb, but not a single duplicate of the parent. It is therefore necessary to propagate from the root to preserve a good sort. If new sorts are required, they must be obtained from the seed, as in the case of potatoes, and occasionally a hit may be made, as was done in potatoes by the late Mr. Paterson, of Dundee, when he originated the Victoria and Bovinia. But when we know that this was the main success of 40 years' perseverance and some hundreds of experiments, there does not appear much inducement to practical men to be the originators of species. In the case of vines, I have known instances where slips from fruitful parents produced twice the weight of grapes that were obtained from others of the same species growing side by side, and under the same treatment. The celebrated Fenton Wheat, which has long been one of the mainstays of Lothian farming, was originated and propagated in this way by the tenant of the farm that gave it its name, and whose position at the present moment in connection with said farm is so sympathetically before the general public. This moveability of tenant-occupiers is so entirely incompatible with the high manorial condition required in market-gardens and the establishment of orchards, that many of the great growers around London are their own landlords. And here I would remark how much the unsettled and hand-to-mouth positions of agricultural labourers of the present day militates against the best cultivation of their cottage-gardens and allotment-grounds, and the propagation of fruit-trees. In Cheshire, where the labourers are almost permanently established in their cottages, it is not an uncommon thing for them to pay their rents and something more by the sale of the surplus fruit-crops; for they use a great deal themselves. And here I would observe that the damsons grown in this county principally in the farmers, and cottagers' gardens, are like their famed cheese, which cannot be produced elsewhere "unless," as was quaintly said by an old county historian, "you take not only the kine and the dairywomen, but the land also;" for in size and flavour they are not approached even by the best products of Kent. They

are not known in the south any more than their best cheeses, because there are too many people with long purses in the Lancashire and Yorkshire manufacturing towns to allow them, or almost any other good thing, to leave the districts. This is another proof of the peculiar ingredients possessed naturally by different soils and subsoils; and as no economic process can alter the latter, though you may the former, deep-rooted plants and trees must always take their character from the natural geological formations. In my own district, on the Bagshot sands, we can grow very good strawberries, but we are obliged to cart the strawberry loams from other districts to do so; and our white sands and black peaty soils are being constantly carted away to grow deciduous plants elsewhere. The only transposition of soils that will pay practically is when found on the spot, and either in the formation or renewal of orchard and market-garden ground may be profitably resorted to; thus in double-spit work a good rich clay, marl, or gravel may be brought to the top; or if not good enough for this, it may be simply turned over. In three-spit work it may be dealt with in three ways—brought to the top, placed in the middle, or simply turned over. Trenching, and deep draining, if necessary, of one kind or another, is the basis in the formation of all orchards and market gardens. The next important step is the proper stocking with trees suitable to the soil and for the purposes required, whether for conversion into cider and perry, or for dessert; and, in the case of market gardens, the adoption of a rotation by which a succession of crops can be obtained without plants of the same tribe following one another. The original cost of forming orchards and market-garden grounds is very various, but in amount it is pretty much alike, because in the cider districts where grass is allowed to grow amongst the trees it is regularly manured and mowed, and in suburban districts the land is highly cultivated. The minimum cost of formation and stocking I have found to be about £30 and the maximum £50 per acre, and in exceptional cases I have known it twice as high. The rents vary from £5 to £20 per acre. The latter sum appears high, but an occupier in Bermondsey who paid £16 an acre and all rates and taxes, to whom some years ago I let a farm 8 miles from Covent Garden at a third of that rent, lamented that this was being curtailed by buildings, as he said it was the most profitable land he occupied. The returns from land of this kind, and from orchards round the metropolis or at greater distances, are so fluctuating that it is no guide to quote them. I have known the produce realise £150 an acre, and in other seasons barely the cost of production, which, including rent and interest of capital, seldom runs short of £30 an acre on well-managed ground. One great drawback to growers is the smallness of wholesale prices in proportion to those at which their goods are retailed. Last year I question if they averaged one-fourth, and yet consumers complain, and say the cost of vegetables is a grievance in every household. Many small growers protect themselves by "standing the market," and the larger farmers have special agents, old, proved and trusted foremen, or some one interested in their profits; but there is still a very large class who are obliged to trust to salesmen, who charge their 10 per cent. in the fruit and vegetables, and 5s. per ton in the potato markets, and be content to take what residue they can get. A novice in the trade or an amateur, has no chance in the London markets, however successfully they may grow the articles required; and it is a question whether consumers have

not an adequate inducement to establish co-operative stores in their respective districts. The following articles which were sent from one moderate sized garden at Fulham to the London market in one year, will show the amount and variety of articles it takes to make up a market gardener's returns:

Forced Radishes.....	5,000 punnets.
Natural ditto.....	288,000 bunches.
Greens	360,000 ditto.
Cabbages	312,000 heads.
Wall flowers	4,800 bunches.
Moss Roses	9,600 ditto.
Hand-glass Cauliflowers..	4,800 heads.
Asparagus.....	600 bundles in a single day.
Lettuces.....	200,000 in one month.

When these grounds change hands, which they seldom do, except those on the smaller scale, valuers are employed by the outgoing and incoming tenants, who are specially acquainted with the business, and are generally market gardeners themselves, and in some cases the payment from the one to the other has been as high as £100 an acre. I have not thought it necessary to enumerate the products which are naturally in season at different periods of the year, because there are so many artificial appliances in use, and supplies come from so many distant places, that our markets are seldom devoid of anything at any time. Horse-and-cart distance at one time embraced the area from which we drew our supplies, and this has still some advantage in connexion with the supply of manure. But if sewage is carried into more distant districts, less highly rented and burdened with expensive labour, this advantage will be lessened. Sanitary precautions will not allow occupiers in the proximity of towns and populous districts to avail themselves of it, but last year I valued the owner into a farm of 160 acres, 8 miles from the Bank, which he has sewaged, and let at £10 an acre to two native tenants—the former rent having been 52s. 6d.; but as the experiment is not yet well begun, I cannot quote or even predict results. Steam-ploughing may also come into play, which it has not as yet done, as a large stud of horses must be kept in proportion to the acreage, for alternate cartage and working on the land. I have not gone into the management of orchards in the cider and perry countries, nor into the numerous and productive fruit gardens of Kent, because they have already been fully described in the county and in local reports, and except that there are innumerable inferior kinds of trees and plants occupying space and soil entitled to better sorts I cannot suggest any improvements in their management. I was asked to bring this subject forward, because for the last ten years I have had a great deal to do in letting market-garden ground, and I consented to do so, more with the view of eliciting information from, than conveying suggestions or directions to, the occupiers of these lands, who though not much heard of in public are entitled to the highest consideration, for they pay handsome rents, expend immense sums in labour, have unceasing labours and anxieties—indeed they must have eyes that never wink, and wings that never are weary—and for all this they have no compensation, but the precarious chance of profit. No shutting up shop with them between seed-time and harvest, with tours of pleasure or instruction between; no very bracing climate to live in; no field or cover shooting; or hunting; or other country sport; very little sympathy between the employers and employed, and none of those patriarchal associations that help to make a country life pleasant, even when it is not very profitable.

POTATO EXPERIMENT.—Knaphill, 1871.—Planted on lazy beds, dunged and dressed with rape-dust and guano in April, and dug in September.

		Per acre.	
		Sets.	Produce.
		cwts.	cwts.
1. Earlies, Paterson's	15	.....	186
2. Regents " .....	"	.....	180
3. Victorias " .....	"	.....	150
4. Alberts " .....	"	.....	143 new.
5. Red Kidneys " .....	"	.....	143
6. Blues " .....	"	.....	129
7. Forty Folds " .....	"	.....	115
8. Blue Kidneys " .....	"	.....	115
9. White do. " .....	"	.....	108
10. Queens " .....	"	.....	104 new.
11. Flukes " .....	"	.....	93 seedling.
12. Bovinias, own seed .....	"	.....	75 *
13. Dalmahays, own seed .....	"	.....	65 *

Mr. J. BRADSHAW (Knowle, Guildford) said the subject which had just been introduced was of a novel and interesting character, and might be divided into several departments. In consequence of the stimulus which had been given to manufactures and the high rate of wages which prevailed in many districts, great changes were taking place in agriculture, and in productions of the soil. Three weeks ago he was in the neighbourhood of Sandbach, which was contiguous to the potteries, and he found that farmers were there able to sell their straw at £5 a ton; crops of cabbages and other vegetables were sent to the potteries and the iron districts, and if that had not been allowed the owners of the soil and the tenant-farmers would not have reaped the advantages they were doing (Hear, hear). He maintained that every district must be farmed according to the locality, the soil, and the demand which there was for a particular produce, and that it was impossible to lay down any hard-and-fast rule. He was the originator of a tariff for the conveyance by railway of manure from London—good night-soil, mixed up with a certain proportion of street sweepings to enable it to be transported. In his neighbourhood they could not get that down to the farm under £2 10s. per ton, 38 miles, cost and cartage included; whereas similar manure could be sent to Scotland for 7s., cost and freight per barge, after landing potatoes in the Thames; and that was a kind of manure which possessed those constituents which were required for the proper cultivation of vegetables in the vicinity of London. As regarded fruit growing, he might remark that he resided on a loamy soil, about nine miles to the east of Guildford, and that he had for some years been very successful in growing Normandy and Brittany pears. He had produced a description of pears which was very nearly equal to the pears of Normandy, he might add could not be produced of the same flavour in the neighbouring locality of Worplesden. On the other hand, they produced at Worplesden certain pears with a better flavour than we could obtain. He mentioned that merely as showing that the soil and climate of a district must be considered if a man wished to farm profitably. He would allude for a moment to the potato culture of Lancashire. He could remember a period, 50 or 60 years ago, he being a child at that time, when members of his family used to send every year a present to Surrey, of—what did they think? An early growth of potatoes; and at that time that was one of the most acceptable presents that could be received in London or the county of Surrey. He believed that if farmers who were contiguous to London would only consult the character of the soil which they had to cultivate, they might compete successfully with some of the continental growers of fruit, and obtain very good returns for the outlay of

capital and labour; whereas on the other hand, if they attempted to produce what the soil was not adapted for, the result could not be otherwise than unfortunate.

The CHAIRMAN, having waited some time for some one to rise, said that as no one appeared inclined to do so at that moment he would make a few remarks himself. As regarded the supposed difficulty of removing manures from London, he thought that so far as the low-lying lands near the metropolis were concerned that difficulty was not insurmountable. He happened to have had the letting of land near London where it had been customary when a load of rye was taken up to London to bring back a load of manure. That manure having been ploughed in, the parties afterwards took a crop of potatoes, which were exchanged in the same manner. The ground having been again manured, there was taken off a crop of white turnips; after which the land was again manured and sown with peas for the next spring. He must observe that he was now speaking of the custom of farming and not of market gardening (Hear, hear). With regard to the point on which Mr. Scott dwelt of congeniality of soil, he was able to state a fact of some interest connected with the meeting of the Royal Agricultural Society at Derby some years ago. A mile or two outside the town of Leicester there was what was called a strawberry garden. The soil was a rich loam, well adapted to grow strawberries, and during the time that the meeting was being held seven tons of strawberries were sent every day from twenty-eight acres of ground, no doubt yielding a very large profit, and that extraordinary produce was simply the result of the soil being specially suitable for the growth of that description of fruit. He quite agreed therefore with Mr. Scott, that they must look carefully to congeniality of soil. He well recollected hearing Mr. Hope state in that room, while speaking of the growth of celery with the assistance of sewage manure, that something like £50 per acre could be obtained in that way. The crops of onions which he had seen grown at Biggleswade, in Bedfordshire, quite confirm Mr. Scott's opinion, that peculiar soils were required for particular plants. They all knew that the largest, finest, and best crops of onions in the world were obtained in that locality. Again he would remark that what he was saying was confined entirely to farming, and that he was not speaking of gardening. In the district of Coggeshall, in Essex, they would find a few fields entirely covered with parsley and others with cucumbers, and if they went out shooting in the autumn they might often see an old hare sitting under a yellow cucumber. He had seen a small district where mignonette and sweet peas were grown together. That might seem a funny crop for a farm to produce, but he had known cases in which it would produce £100 per acre, and that showed the importance of taking care to produce the proper crop on peculiar soils.

Mr. MARSH (Sandwich) said: Although he had seen something of fruit-growing in Kent, he was not himself a fruit-grower, at all events, only to the extent of half-an-acre of apples or something of that kind. Kent was, as they all knew, famous for its cherry orchards. In looking over an old chronological Kentish work some years ago, he found it stated that in 1540, at Teynham, near Sittingbourne, a cherry-orchard of 32 acres produced in one year £1,000. It did not appear whether that sum included the cherries alone or the land as well, but in either case that was a very large amount to be paid 330 years ago. In his own neighbourhood—Sandwich—market gardening had lately progressed with great strides. They had sent large quantities of brocoli and other vegetables to Bir-

tingham and Manchester, and the returns had sometimes been wonderful. As regarded onions, he must say the return seemed very uncertain. For example, whereas last year onions fetched 8s. or 9s. a-bushel, this year they were comparatively worthless. Gooseberries and cherries were largely grown in his neighbourhood. Many acres of land were employed in that way, and when that was the case the market gardener was knocked over, as it were, in comparison. It was not uncommon for such a person to pay £4 or £5 an acre for his land, and besides that to spend a very large amount on guano. A short time ago he asked a person in that position, who was a first-rate manager, how he made it pay, to which he replied, "Well, if I can get my cabbages to market a few days earlier than my neighbours, although I may have used four or five, or even six hundred weight of guano per acre, the money is soon repaid." He (Mr. Marsh) was a very small market-gardener himself. Last year he cultivated about an acre and a-half, and lost from £10 to £15. Hence he should not enter into the thing very fiercely this year (laughter). He sold very nice potatoes at 2s. a-bushel in the London market; but as there was commission of 10d. to come off, he did not obtain any very great return.

Mr. W. CLUTTON (Penge) said Mr. Bradshaw spoke of £5 per ton having been paid for straw. He (Mr. Clutton) was quite sure that any landlord would be very glad if his tenant could sell straw at that price; and equally certain was he that if the tenant were an honest man he would take care to bring something back (Hear, hear). They had also heard that evening of £20 per acre being made by market gardening near London. At East Bridford, near Nottingham, a man paid a rent of £5 an acre, and made £100, while a friend of his who lived about three miles from Tunbridge, made £50 an acre by growing Kentish cob-nuts, doing little more than pruning his trees as they ought to be pruned. He was very sorry to find that men living near London spent so much money and made little more than £20 an acre.

Mr. H. CORBET felt that something like an apology was due for there being so few speakers who were specially acquainted with that subject; but he must explain that one or two gentlemen had promised to send him papers, and Mr. Murton, one of the oldest members of the Club, some particulars respecting the cherry-orchards of Kent.

Mr. M. REYNOLDS (Warden, Biggleswade) said he lived in a part of Bedfordshire where vegetable cultivation was very largely carried out; the parish of Sanday was the originator, as it might be termed, of market gardening. They had heard a good deal about certain soils being adapted for the growth of particular vegetables. The soil of the parish of Sanday was of a most varied description. A portion of it was a very fine alluvial soil; another, and a larger portion, was no doubt originally a very poor sand; the remainder and perhaps by far the larger proportion comprised some of the strongest land in Bedfordshire. Up to about 20 years ago this latter description of land was hardly thought of for gardening purposes, but having been well drained, he believed it was some of the most profitable land in Sanday at the present time. They had heard that evening of very high rents being paid by market gardeners. In his neighbourhood they knew nothing of £20 per acre, £15, or even £10. Some land at Biggleswade was let at £8 an acre, but that rent was confined to about 100 acres in the immediate neighbourhood of a railway-station; and from his knowledge of the neighbourhood, he should say that the rents of land let for garden-

ing varied from £3 to £6 an acre. As regarded the price of labour he believed that the wages paid by gardeners in that district was not as great as many gentlemen appeared to suppose. He did not think that any gardener in the winter season paid more than 2s. a day for labour. In the spring of the year and in busy times, gardeners paid 2s. 6d. a day and gave their men two pints of beer each, and perhaps in very busy times they might pay as much as 3s. a day; but he believed that with that exception half-a-crown a day was the extreme amount that a market gardener's labourer obtained. ("How many hours did they work?") The usual number of hours; if they worked extra hours they were no doubt paid extra. As regarded crops, he remembered a period when potatoes and onions were the principal garden produce grown in his neighbourhood, but he did not think they were now able to compete with Cornwall and the Channel Islands for early potatoes. The earliest potatoes grown in his neighbourhood were Shaw potatoes, and they did not come in sufficiently early. He could remember that for many years those potatoes fetched in the spring a good price as seed, but that time was past. This year Shaw potatoes had been a perfect drug. Any quantity might have been bought at £2 a ton, and a great many were used for agricultural purposes, given to pigs and so on, because there was no demand for them. Regents, too, fetched a very poor price; he did not think anyone could get more than £3 or £3 5s. per ton for them. During the French and German war, when there was a very small importation of onions from Germany, onions went up to a very high price, in some instances as much being paid as £15 a ton. He believed that many persons would be glad to dispose of them now at 40s. It was an unfortunate circumstance that onions had this year rotted to a greater extent than was ever known before.

Mr. CLUTTON: The farmers have killed all the rabbits, and so no onions are required (laughter).

Mr. REYNOLDS said the two crops that were grown in his neighbourhood most largely and apparently to the greatest advantage, were turnip seed and cucumbers. The great principle of market-gardening was high manuring. The quantity of manure that was put on the land would astound many who did not live in a garden district. He had known as much as 60 tons per acre to be put on garden land; 100 bushels of soot per acre was a usual dressing. He thought the only way in which gardeners could protect themselves was by growing a variety of crops. Of late years there have been considerable failures in several of the garden-crops grown by the smaller class of gardeners; but on the other hand, where the crops had been varied, and cultivation had been carried on upon a large scale, as was now the case in Bedfordshire, the result had generally been remunerative. Gardeners employed labourers only when they actually wanted them, and when they did not require their services, they turned them adrift; and in wet and bad seasons that operated very disadvantageously to the neighbourhood. Gardeners did not keep men on for the mere sake of employing them; whereas, as they all knew, farmers employed throughout the year a certain number of labourers, whether they wanted them or not. If a gardener wanted 200 hands, he would have them if he could get them; but he would have no hesitation in reducing them to a very limited number whenever it suited his purpose.

Mr. J. BRADSHAW, in proposing a vote of thanks to Mr. Scott for his Paper, adverted to the comment of Mr. Clutton on his statement that £5 a-ton had been paid for straw, ob-

servicing that there was nothing extraordinary in that price, considering that the farm was near the Potteries, where a great deal of straw was required for the packing of earthen-ware.

Mr. W. CLUTTON, in seconding the motion, observed that £5 a ton was an exceedingly good price, and that a man who sold his straw at that rate could well afford to bring back some manure. A gentleman had spoken of the great advantage of sending vegetables and fruit to market early. He had always considered it an immense benefit to be able to do that only two or three days before others. For a short time young peas realised a large amount of money; but it was only for a very few days: the thing soon came to an end. He was not a gardener; but he was glad to hear such discussions as that, because he believed they did a vast deal of good. There was one subject which he had rather expected to hear discussed, or at least mentioned that evening—he meant the strike among the Warwickshire labourers (Hear, hear). He was not going to enter into that matter, because it did not strictly belong to the question before the meeting; but he must say that they ought all to think about it. There was no reason why agricultural labourers should not strike as well as bricklayers and carpenters, who had always received a great deal more money, and therefore farmers should be prepared for what was coming (Hear, hear).

The motion having been put and carried,

Mr. SCOTT, after returning thanks, observed that between market-gardeners and labourers there was nothing that de-

served to be called mutual sympathy; but everything was a mere question of money. The labourers might occasionally get high wages, but, as had been truly remarked by a previous speaker, when they were not wanted they were no longer paid. A subject had just been broached which was dangerous, and should, in his opinion, not have been introduced unless they were prepared fully to discuss it. Having travelled about the country a good deal, and having been in almost every county in the three kingdoms, he must say that he had never found the low principle of supply and demand regulating the relations of farmers and their labourers (Hear, hear). Farmers had a much higher claim on those whom they employed than manufacturers had on their workpeople. He had often seen labourers kept on in the dead of winter doing scarcely anything, living almost like cats, in idleness at home, when they might have been discharged. He maintained, therefore, that farmers had a much higher claim on those whom they employed than manufacturers and others, who dispensed with the services of their men when they ceased absolutely to require them; and he hoped that the good sense of the labourers and their advisers would show them that those who were treated with such leniency, kindness, and patriarchal feeling, ought not to take advantage of their position at times which were inopportune for their employers.

On the motion of Mr. Marsh, seconded by Mr. Newton, a vote of thanks was given to the Chairman, and this terminated the proceedings.

THE CENTRAL CHAMBER OF AGRICULTURE.

The monthly meeting of the Council was held on Tuesday, April 16, at the Salisbury Hotel, Mr. E. Henege in the chair.

The SECRETARY read a resolution passed by the East Suffolk Chamber, at a meeting held on the 2nd of April, as follows: "That this Chamber greatly regrets that the Council has allowed another Budget to be brought in, and a handsome surplus to be disposed of without having appointed a deputation to wait upon the Chancellor of the Exchequer, and urge him again to repeal the Malt-tax."

This communication was referred to the Business Committee.

Mr. MUNTZ said at the last meeting he suggested that all members of provincial chambers who might attend the general meeting in May should be allowed, not merely to take part in the discussions, but also to vote. He now moved the following, in the belief that, if it were adopted, such an expression of opinion would influence the general meeting to which he alluded: "That it will be desirable to obtain an expression of opinion from all agriculturists present at the general meeting of members to be held on the 7th of May, for which purpose the words after 'chair' in law 14 should be suspended during that meeting, and the following words substituted, 'and shall have power to vote.'"

Mr. HODSOLL seconded the motion.

Mr. PELL, M.P., opposed the motion, observing that it was not desirable to suspend a law even for such a purpose, and expressing doubts whether it could be done.

Mr. CALDECOTT expressed his concurrence in this view, and the motion was negatived.

Sir M. LOPES, M.P., as Chairman of the Local Taxation Committee, moved the adoption of the following report:

In presenting their report the Local Taxation Committee have to announce a considerable accession to their numbers since the last meeting of Council, the names of the Duke of Rutland, the Duke of Manchester, and of thirteen additional members of Parliament having been added to the Committee. While anxious to keep the question of Local Taxation apart from all party considerations, your Committee cannot

fail to note recent adhesions by some of the more prominent Parliamentary leaders to their policy. Mr. Disraeli, speaking in the House of Commons on the proposal to throw the costs of election expenses on the rates, used these words: "I heard with alarm from the Government that they are favourable to defraying the charges from the rates; I think the time has come when it ought to be made clearly apparent to any Government that may exist in this country that no increase of the rates can be tolerated so long as the area of taxation from which those rates are drawn is limited as it is at present. If we cannot solve that most perplexing problem of increasing the area we must leave the rates alone; but whatever the purpose, or whatever the amount, I am convinced the wisest policy of the ratepayers of the country is to resist any increase of the rates, however slight and however plausible the pretext, until Government make up their minds to encounter a difficulty which may be most perplexing to any member who comes forward with any proposal to increase them." More recently Mr. Ward Hunt, the ex-Chancellor of the Exchequer, has publicly advocated the policy indicated in the motion of the chairman of your Committee, and claimed the removal of such charges, at all events, as those for police, lunatics, and goals from the local rates to the imperial exchequer. Such admissions as these are, in your Committee's opinion, the surest indications that the injustice which it has been their duty to ventilate during the three past years is fast obtaining a prominence which no Government, whatever be its party opinions, can much longer affect to ignore. *Costs of Criminal Prosecutions.*—The Committee have to report that the debate on the Chairman's motion on the disallowances by the Treasury of the costs of criminal prosecutions was in the highest degree satisfactory. The conduct of the Treasury officials was unanimously condemned, and the suggestion of the Home Secretary and Under Secretary, Mr. Winterbottom, that a remedy for the present state of matters might be found in the Public Prosecutor's Bill, being pointed out to be at best but a distant prospect, Mr. Baxter was finally compelled to accept, on the part of the Treasury, the fullest responsibility of dealing with the matter not only effectually but at once. County and borough ratepayers may be congratulated, therefore, that after the repeated promises of the Government to amend their proceedings, no further attempts will be made to evade the compact entered into more than a quarter of a century ago,

by which this part of the expense of administering justice was formerly transferred to the imperial exchequer. *Public Health Bill.*—Your Committee have carefully considered the Government Bill on this subject issued subsequent to their last report. They find it open to the objections they then indicated, being incomplete as attempting no consolidation of the various statutes on the subject, objectionable in the centralising tendency of some of its provisions, and destitute of any proposal to carry out the recommendations of the Sanitary Commissioners as to State aid. Under these circumstances it was thought expedient to put a question to Mr. Stansfeld in the House, asking if he had prepared any estimate of the additional cost which his measure would throw upon the rates, and if he proposed, and in what manner, to give effect to the Commissioners' recommendation. To the first part of the question Mr. Stansfeld replied that he was unable to give any such estimate, and to the second part he answered that the Government had the suggestions of the Commissioners "under consideration." He has since announced that he will be prepared to make a statement on going into Committee of the intentions of the Government as to imperial assistance to the local authorities. After mature consideration your Committee deemed it impolitic to attempt to oppose a direct negative to the second reading of the Bill. However much they may disapprove many of the details of the measure, its main principle—the more effectual administration of the laws relating to public health—is a reform too imperatively demanded by all classes of the community to be combated in the House of Commons. They consider it best to endeavour to amend the Bill in Committee, directing especial attention to the following points:

- (1) To ensure, if not a general consolidation of the twenty-four statutes embodying the existing law on this subject, which they think most important, at least some attempt to place the duties, powers, and responsibilities of the new local authorities before these bodies in an intelligible form.
- (2) To insist on the preservation of local self-government, and such a degree of independence of local action as can alone insure the efficient administration of the law.
- (3) To obtain from the Treasury an amount of assistance proportionate to the large powers of inspection and supervision granted by the Bill to the central authority.

Fires Bill.—The attention of your Committee has been directed to several other measures now before Parliament which entail additions to the rates. One of these, the *Fires Bill*, introduced by Mr. McLaughan, proposes to lay on the rates the costs of inquiries into the origin of fires. In committee, Mr. Clare Read, a member of your Committee, will endeavour to charge insurance offices with these expenses. *Justices' Clerks Salaries Bill.*—This bill contains a proposal to pay out of the local rates a salary to justices' clerks. Accordingly on going into committee Sir M. E. Hicks Beach another member of your Committee, will move an amendment to the effect that it is inexpedient to impose on county and borough ratepayers any liability for the payment of justices' clerks beyond that to which they are subjected by the existing law. *Municipal Corporations (Borough Funds) Bill.*—This measure is similar to that opposed by your Committee last year. It would place in the hands of governing bodies absolute power to charge on the rates of their district all expenses incurred in promoting or opposing any schemes, measures, or objects without any previous sanction on the part of the ratepayers. On the motion of Lord Mahon, a member of your Committee, this bill has been referred to a Select Committee of the House of Commons. *Registration of Borough Voters Bill.*—This bill is also the same as one successfully opposed last session. It proposes to increase in boroughs the expenses of parliamentary registration now borne by the ratepayers by the appointment of an additional officer as registrar. Mr. Pell, another member of your Committee, has kindly undertaken to watch the progress of this bill in Committee. *Election Expenses.*—Mr. Fawcett's proposal to charge on the rates the expenses of parliamentary elections has not yet been discussed. Notwithstanding a recent intimation that the Government look favourably on this proposition, your Committee will continue to offer to it their strongest opposition. As a Committee, they have no concern whatever with the question whether these charges should or should not be borne by the candidates themselves, but on principle they feel bound to resist any attempt to add another new burden, however small, to the rates. *Poor Law (Scotland) Bill.*—Your Committee would direct attention to some of the proposals contained in this bill, which is founded on the recent report of the Select Committee on the Scotch Poor Laws, and which has now been read a second time in the House of Commons. This measure contains propositions to defray one-half the cost of lunatics, half the expenses of medical officers and medicines, and the whole costs of prosecutions under the poor law, from the Imperial Treasury, evident proofs of the concurrence of Scotch ratepayers with the recently announced policy of your Committee. *Town Ratepayers.*—Your Committee are glad to point to an increasing interest among householders in towns to a sense of their common interest in

a revision of local burdens. They would direct attention especially to the speech of Mr. Tillett in the Town Council of Norwich, and to the action of that body in inviting the co-operation of all municipal authorities in the effort to remove national charges from the rates. In London the Metropolitan Poor Rate League is still extending its operations. Mr. Pell had recently occasion to address one of the meetings convened by this body in St. George's-in-the-East, and on Wednesday last a crowded meeting was held in St. George's, Hanover-square, Dr. Brewer, M.P., being in the chair, when a most hearty and enthusiastic reception was accorded to the principles of the association. *Chairman's Motion.*—The motion of which notice was given by the chairman of your Committee stands for discussion this evening. Your Committee regret to observe that Sir Thomas Ackland has placed on the notice-paper an amendment which, although professing to admit the propositions of the original resolution, appears to be an attempt to divert the attention of the House from the real issue. In the debate of last year the Government declined to meet the proposals of the chairman with a direct negative, but moved the previous question, intimating that they themselves were prepared to deal with the subject. A similar policy appears to prompt the present amendment. The proposals of Sir Thomas Ackland as to revision of new rates and abolition of certain exemptions, however fit subjects for discussion on their own merits, are totally inadequate as remedies for the grievance of which we complain. Your Committee only trust that this amendment does not indicate an attempt to introduce into this question the disturbing element of party-contention, which it has been their most anxious desire from the outset in every way to avoid. *Subscriptions.*—Your Committee have to acknowledge the receipt of the following contributions:

	£	s.	d.
The Gloucestershire Chamber.....	10	0	0
The Duke of Rutland, K.G.	10	0	0
The Earl of Darley	10	0	0
The Duke of Manchester	5	0	0
The Northamptonshire Chamber	5	0	0
The Sunderland Chamber	5	0	0
Sir F. M. Williams, Bart., M.P.	5	0	0
Edmund Green, Esq., M.P.	5	0	0
A. P. Arkwright, Esq., M.P.	5	0	0
J. H. Scourfield, Esq., M.P.	5	0	0
F. C. Smith, Esq., M.P.	5	0	0
C. H. Mills, Esq., M.P.	5	0	0

Further subscriptions have also been promised by the Essex Chamber of Agriculture, Lord Egerton of Tatton, the Hon. G. W. Milles, M.P., and J. Reginald Yorke, Esq., M.P.

Mr. HODSOLL, in seconding the adoption of the Report, said it could not for one moment be contended that any fixed impositions for national purposes should be added to the already overburdened county and borough ratepayers. No person could assert that the present system of levying the poor-rate was unalterable, and therefore should for ever continue; for all the political economists of the present day agreed that, not the means, but the profits of production only should be taxed. It was the duty of all who felt the injustice of the present arrangement to endeavour to shadow out some plan for the rectification of the basis upon which that unjust burden on real property rested, and, as in the collection of contributions for the relief of the indigent poor, and for setting them to work, the Act of Elizabeth enacted that a certain portion of such contribution was to be levied on the occupation and a further certain portion on the ability of the parish, he thought they would only be doing what was right in this matter in urging upon the attention of the Government and the House of Commons the necessity of returning to the original intention of the law on that much vexed question. He was also of opinion that, for the solution of that question, the present poor-rate should be abolished, and in lieu thereof the present house-tax be doubled, and that the ability of every individual should be brought by legislation to contribute towards such relief of the poor, and towards all other national objects, many of which—and they were annually increasing—had been thrust for convenience on the poor and county rates, and that the payments necessary for the support of the poor and other national objects should be made out of such funds from the imperial exchequer or local government board, in the same way as grants were now made through these sources towards the expenses of the militia, police, lunatics, medical, and schoolmasters, and as capitation grants were made for the education of children in the various national schools throughout the kingdom. He thought that, before the Public Health and Sanitary Bills passed into law, it would be incumbent on any Government to rearrange and readjust the local taxation of the country. It was a farce to discuss the provisions of any bill which proposed to add any

thing to the rates until an equitable readjustment of the local burdens has been effected. He might add that the adoption of the Public Health Bill of the Government would add one shilling in the pound to the rates.

The report having been adopted,

Mr. HODSOLL moved as a rider,

That the first portion of Sir Thomas Acland's amendment is a seeming repetition of the proposition contained in the original motion, but couched in vague and ambiguous language, while the latter part, suggesting the division of rates between owners and occupiers, contains no remedy whatever for the unjust incidence of local taxation, and is simply an attempt to evade the real question at issue.

Mr. MARSHALL HEANLEY having seconded this rider, it was agreed to.

Mr. JABEZ TURNER then moved the following :

That this Chamber, while sensible of the urgent necessity for sanitary legislation, strongly disapproves of much of the Government Public Health Bill, more especially the extraordinary powers it confers upon the Local Government Board, and the want of provision for consolidating the existing laws, and considers that the attempt to saddle the whole of the unlimited outlay for sanitary expenditure upon owners and occupiers of property at present rateable should meet with the most determined opposition.

He said the Government Bill was, in his opinion, an extremely incomplete measure. Sir Charles Adderley's Bill was, he thought, far preferable, inasmuch as it repealed the existing Acts and legislated afresh on all the matters embraced on that important question. The Government measure was a sort of patchwork, and provided very inadequately for the accomplishment of the object. He had been told that several provisions in Sir Charles Adderley's Bill were likely to be incorporated in the Government one, and if that were the case it might be materially amended, the want of consideration being the great blot in the latter. As the Government Bill stood it would be very detrimental to manufacturers. In fact, the pollution of streams was dealt with in such a manner that it would have the effect of paralysing a considerable amount of industry throughout the country. Moreover, the Council would, in his opinion, greatly neglect their duty if they did not resist any further imposition on the rates until the burden of local taxation had been properly adjusted (Hear, hear). According to clause 79 no limit whatever was to be placed on the expenses. Any local decision limiting the expenditure might be set aside, and the result might be that in some cases the rate, instead of being limited to one shilling in the pound, might amount to as much as 10s. He maintained that the carrying out of sanitary regulations was a matter of public obligation, that the nation was responsible for the preservation of the nation's health, and that the larger items of outlay, especially for such things as the construction of sewers and other matters of that kind, provided for in the Bill, should be largely supplemented from Imperial sources. But the objection still remained that the property at present rated bore a very small proportion to the whole property of the country, and without troubling the meeting with statistics he would remark that the income of the country assessed for local purposes amounted to considerably less than the whole income of the country. As regarded the rating of canals and railways the Government Bill followed the precedent of the Nuisances Removal Act of 1867, fixing the assessment at one-fourth of the ordinary rateable value; but it was a great question in his mind whether that proportion should be continued in favour of railways. He found in that Bill the same objectionable features that existed in the Government measure with regard to rating. There was the same delusion of calling the authority local when it was in fact a central authority totally irresponsible to the electors or ratepayers. The electors and ratepayers were liable to be fined and to be forced into all sorts of expenses if they did not comply with the wishes of the central body, and if that were local government he did not understand the term.

Mr. WOODWARD (Worcestershire), in seconding the resolution, expressed his conviction that the Government Bill would, if passed, introduce a state of chaos, while one great object of legislation should be to simplify the law.

Mr. CORRANCE, M.P., said, having already taken some action in Parliament with regard to the Government Bill, he would like to know how far the course he had pursued was acceptable to the council. It appeared to him that they ought, as a body of practical men, to endeavour to give a practical

shape to the opposition, and with that view he had himself given notice of his intention to move that the Bill be referred to a select committee. He thought the authority to be set up should be a thoroughly representative one, and considered that a fair opportunity was afforded by it for introducing the valuable principle of county financial boards, all attempts to carry out which had hitherto failed. What he intended to propose in the committee on the Bill was that Parliament should establish local sanitary boards, embracing the area of the county itself; that it should similarly delegate all the requisite powers, except that of making a rate, to a committee to be formed out of the board of guardians, or some other similar body, and that two members of the board should, together with the chairman, serve for three years, with an equal number of justices of the peace, and that these should collectively form the local authority.

Mr. BIDEELL protested against any more charges being imposed on agriculturists of which other classes reaped the benefit without contributing anything.

Capt. CRAIGIE said Mr. Stansfeld had divided the expenses into general and special expenses. The former were what were known as establishment charges—a very motley list, including inquiries, provisional orders, and so on, all such charges in the rural districts following on the local rates and no deduction being made. The special expenses were of a more limited nature, embracing such things as drainage, sewage, and so on. All these were to be levied as they were under the Sewage Act of 1867, by which railways and canals were treated as land. Under Sir Charles Adderley's Bill the land would be dealt with much more fairly; and were the two Bills before them for selection, they could not hesitate which to choose.

The resolution was then put and carried.

Mr. FELL, M.P., moved the following :

That the Council is of opinion that the advantages connected with endowments applicable to the education of the middle or working classes should be confined as near as may be to the locality intended to be benefited by the former; and that the general good conduct, as well as the intellectual capacity of children, should be considered in the application of endowments left for educational purposes.

In the present day the tendency of things seemed to be for the lesser endowments in the country to be swept into great centres, and many parishes and villages had suffered from that cause. He hoped that the Endowed Schools Commissioners would not fall entirely into that prevalent idea, and indeed there seemed already to be difficulties in the way of carrying it out. With regard to the second part of his resolution, he thought it most dangerous in principle to view intellectual capacity, that is, the brains that a boy was born with, as the only or principal ground for reward. He had some sympathy with the dunces, and a great deal with the industrial plodding child whose parents were determined, at whatever pains and cost within their means, to have him properly educated, and he thought that smaller educational endowments might very well be applied as a reward for general good conduct at school. At present such endowments were often swept up into and went in relief of the school fund, the pockets of subscribers being saved to that extent; and that did not appear to him consistent with sound justice and equity. He did not see how a poor man living in a parish with an educational endowment could be better off than a poor man living in a parish without any such endowment if the idea which he had mentioned were carried out; and what he would suggest was that in cases in which a certificate had been obtained of regular attendance on the part of a child and generally deserving conduct, the parent might receive benefit in the way of the return of a portion at least of the fees which he had paid at the end of the year.

Mr. SYKES, M.P., in seconding the resolution, referred to the case of Emmanuel Hospital, and the course pursued as regarded the education of poor boys by the Corporation of London, and expressed his strong disapproval of the movement for swallowing up of small endowments to promote middle-class education.

CANON BRERETON said he should deprecate as strongly as anyone the diversion of educational endowments from the objects of the founders, except on one or two grounds; namely, that it was proved by satisfactory evidence that those objects had become undesirable or obsolete, or that they had been already provided for in some other way. He thought every one would agree with him that elementary education was be-

coming less and less an undesirable object in England (Hear, hear). There had certainly arisen of late an unfounded notion that one effect of the Elementary Education Act had been to make endowments for that purpose superfluous. The intention of Mr. Forster's Act was to ensure that there should be the means of elementary education in every district in the country; but it most distinctly recognised the principle that in order to provide those means of education every school should be freely open, and as a matter of fact the Act had called forth a very large flow of voluntary contributions, both from owners and occupiers of land. It would be a monstrous deduction from the working of the new system that there should be a confiscation of the old endowments, when they were appealing to the country for fresh endowments. Mr. Forster, who so well deserved the gratitude of the country for the manner in which he had carried out the Act, had spoken of it as a foundation and not a superstructure. That was an ominous speech coming as it did from Mr. Forster, and Mr. Stansfeld had delivered one which was still more ominous, indicating that the Government intended to depart from the principle of voluntary contributions, and to adopt the principle of compulsory and gratuitous education. What he referred to looked like the shadow of the coming event. He felt that compulsory and free education was not required in this country, and he believed it would be most mischievous. Not merely as a clergyman of the Established Church, but in the interest of education itself, as he understood that great and comprehensive term, he strongly deprecated what would make one of the most valuable things on earth comparatively speaking of no value, inasmuch as the poor were not likely to appreciate what was compulsory, and cost nothing. At the same time he felt that all endowments ought to be efficient; and he would ask the Council to remember that while there were considerable endowments for elementary education there were also many large endowments for secondary or middle-class education. He thought that if that Council, representing the agriculturists of England, would set on foot a movement in order that the latter class of endowments, as well as the former, might be applied to their real objects, they would be setting a good example to those who were engaged in the cause of education. He believed it was essential that the capital of those endowments should be combined. While he would give a parish the full benefit of the revenue of any property left for its benefit, he maintained that it was for the interest of all that capital should be so combined as to secure an efficient system of education; and for that purpose he thought it might be desirable to give a guarantee on public property, which would secure to it the benefit intended. What was wanted was a combination of capital and affiliation of schools of the humbler class with schools of a superior grade and colleges. The rev. gentleman concluded by proposing an amendment which as the result of some conference ultimately assumed the following shape:

That to appropriate the endowments intended for elementary education to secondary or middle-class education would be contrary to the intention of the Endowed Schools Act 1869; but it would be very desirable that the endowments generally, and especially those properly applicable, to secondary education should be locally combined and organised, so as to remove the scandal of their present general stagnation; and for this purpose, a county organisation, as recommended by the Schools Inquiry Commission, is necessary, and ought to be provided for by the Legislature.

Mr. W. C. LITTLE (Wisbeach) seconded the amendment.

Lord GALWAY, M.P., expressed his sympathy in what had been said respecting Emmanuel Hospital and the conduct of the Corporation, for whose courage in opposing the Commissioners he avowed his admiration. There was one gentleman in the country who had displayed similar courage—he meant Archdeacon Denison. He hoped that the trustees who had large endowments under their care would assist those who had small ones, and that the two would act usefully together.

Mr. BROWN (Essex) said he lived in a neighbourhood where what was meant to be a large middle-class school was almost entirely monopolised by persons belonging to the upper classes. Many small endowments had been altogether in abeyance, and no one knew what had become of them. He had met with one case, money which was left to support a grammar school had been applied to elementary teaching. The education of the middle classes was a very serious question in the present

day, many children in national and British schools receiving a better education than was given in middle-class boarding schools (Hear, hear). He thought the Commissioners ought not to be blamed for gathering up small endowments and trying to benefit all classes. It appeared to him a great scandal to the country that endowments for middle-class education were in so many cases lost to the neighbourhood they were designed to benefit (Hear, hear).

In reply to a question from Mr. Biddle,

Mr. BROWN observed that the fees in the school to which he had just alluded were forty guineas per annum, adding that in these days an ordinary farmer who had two or three sons could hardly be expected to pay such an amount.

Mr. NEVILLE-GRENVILLE, M.P., said the great complaint against the Commissioners was that they had in some cases stepped beyond their province and seized hold of endowments which had been well used for the purpose contemplated by the founder in order to amalgamate all endowments in a sort of *omnium gatherum*.

Mr. PELL, M.P., said he had seen the Commissioners on that subject, and made suggestions like those involved in his resolution, and they replied that they considered the suggestions well worthy of attention.

Mr. PELL's motion was then put and carried, and Canon Brereton's was likewise adopted.

The next subject appointed for consideration being "The Masters' and Servants' Wages Bill,"

The CHAIRMAN remarked that Mr. Clare Sewell Read had intended to introduce that question, but had been compelled to leave, and asked Mr. Pell to perform that task.

Mr. PELL, M.P., said that as he was on the Committee of the House of Commons appointed to consider that Bill, it would be his duty to watch any proposal or suggestion that might be made by Mr. Mundella, or those who agreed with him; but they were sitting with closed doors, and probably no evidence would be taken, and therefore he felt hardly at liberty to say what took place at the meeting which had been held. But he should like to point out to the Chamber one fatal objection to Mr. Mundella's proposal to include agriculture in the operation of the Bill. That Bill was the result of the Government Commission which made its inquiry about a year and a-half ago, and was confined to certain industries of which agriculture was not one, and it would be monstrous to include agriculture when there was no inquiry with regard to it.

Mr. BIDDELL (Suffolk) said one provision of that Bill would certainly affect agriculture. It was provided that no part of any payment of wages should be made in kind (cheers). In his neighbourhood the harvest-work was put out at so much per acre. He paid his own men so much per acre, and at the commencement of harvest sent his waggon for three bushels of malt per man, so that they got malt at the wholesale price. That was no advantage to him, but the want of it would be a loss to his labourers, and he should like to know whether it could be regarded as payment in kind.

Mr. MUNTZ said he had a very decided opinion that all wages ought to be paid in coin (Hear, hear); but, as agriculturists had not yet had sufficient time to consider the matter, and did not yet see their way to overcome the difficulties, he thought it would be unwise to include agriculture in the bill. He did not think there was much in what Mr. Biddell mentioned. That gentleman supplied his labourers with a certain number of bushels of malt, and if he did not do that he might give them the money.

Mr. BIDDELL observed that he did not feel bound to do that.

Mr. MUNTZ thought that all transactions with regard to wages ought to be carried on through the medium of money, which had a clear, measured value. Experience had taught him that when labourers were paid in anything but coin of the realm, employers who were near and close wronged the labourer, and employers who were liberal wronged themselves. The great evil which now existed in Warwickshire was mainly attributable to the fact that the wages of labourers had been partly paid in coin and partly in kind (Hear, hear). He was certain that there were many farmers in Warwickshire who paid their labourers well and liberally, but there were others who were not doing so. There were some who paid a certain amount in coin and a certain amount in kind. Such persons might say, "We give our labourers so much in this, and so much in that;" but what was given in kind might be of inferior quality. He said in Warwickshire, and

now repeated, that the only means of clearing up the difficulty which had arisen between employers and employed in the agricultural districts was to do away with all payments that were not in coin of the realm, and he was delighted to think that the Warwickshire Chamber were so unanimous on that point.

Mr. BIDDELL then moved, from the agenda paper, "That the subject for the Council meeting on May 8th should be: 1. The resolutions passed by the general meeting on the previous day. 2. Farm labour. 3. The Agricultural Children's Bill."

Mr. PELL said there was a clerical error in the Agricultural Children's Bill which he wished to take that opportunity of correcting, having had a great deal to do with the drawing up of the bill. Clause 9 was opposed to the interpretation clause. The latter clause said, "A child shall mean a child under twelve years of age;" whereas clause 9 fixed thirteen as the limit. The interpretation clause was right, the difference not being designed, but simply an error in the proof. The hon. member went on to deprecate the discussion of the labourers' question by the Chambers, saying that he thought it was one which those concerned could settle very well between themselves. Some masters treated their labourers badly, others well; and he thought the latter, at all events, would have no difficulty.

Mr. BRAMLEY moved, and Mr. Jabez TURNER seconded, an amendment, to the effect that the question of farm labour be adjourned.

Mr. CALDECOTT thought it very desirable that there should be some authoritative expression of opinion from the Chamber.

Mr. WOODWARD expressed his concurrence. The question had been recently discussed in Warwickshire in a most temperate spirit, and the discussion produced a good effect.

Mr. JABEZ TURNER maintained that it was not within the province of the Chamber to discuss the question, and that it should be left to be settled between the farmers and the labourers. At the same time he must say he had extremely regretted many expressions that had been used in some of the leading journals of the day.

Mr. HEANLEY (Lincolnshire) said that in his county there was nothing to call for a discussion.

Mr. FORD (Warwickshire) observed that the strike was by no means confined to that county, and expressed his conviction that meetings like that held in Warwickshire on the previous Saturday were likely to put an end to the strike.

Mr. T. WILSON said he was very much surprised to hear Mr. Heanley say in effect that there had been no strike in Lincolnshire. At Long Sutton there was already a lock-out, the labourers having given notice to the employers that they

would begin to work at a certain hour in the morning and leave at a certain hour in the afternoon, and that they would not work with any man who had not joined the union. Such demands as these must be resisted. Many men wanted less work for higher pay.

The CHAIRMAN thought it was quite possible for the Council to discuss that question in a proper manner, and he wished for discussion in order that there might be an opportunity of refuting the misstatements of agitators who had no work of their own to do, and therefore tried to interfere with everybody else (cheers). He had no hesitation in saying that he referred to Mr. Auberon Herbert and Mr. Odger. Some newspapers, too, had rather wandered into the region of fancy, and puffed into importance what would otherwise have gone off in smoke. There could be no doubt that strikes were spreading, and he thought it desirable that labourers should know as soon as possible that farmers were ready to treat them fairly. It might be shown to labourers that if they insisted on too much they would lose more than they would gain; while on the other hand, if they were content with a small rise of wages, they would lose none of their privileges. He, for one, could not view the labour question apart from that of local taxation, and Sir Massey Lopes viewed the matter in the same light, while another absent member of the Council, Mr. C. S. Read, was strongly impressed with the necessity for a discussion, in order that some of the errors which were being propagated might be dispelled.

Mr. PELL again deprecated the discussion of the question by the Chamber, and said the case seemed to him one to which the proverb was applicable that "speech is silver and silence golden." That might be a very good subject for a paper to be read before the Farmers' Club; but if it were discussed there it might lead to angry feelings, and the views expressed be misunderstood.

Mr. T. DUCKHAM said, the agitation of the subject having excited a large amount of sympathy, he thought they ought to discuss it. The question was one of pressing importance to the agricultural interest generally, and he thought that after so many local chambers had expressed their opinion, the Central Chamber ought not to avoid it.

Mr. WEBB (Cambridgeshire) said the question had been discussed in his county in a temperate manner, and the results were beneficial.

The question was then put and the motion carried. It was, however, determined that the consideration of the Agricultural Children's Bill should precede that of farm labour at the meeting in May.

The Council then separated.

LAND OWNERS AND LAND OCCUPIERS.

A great fact has been established in the House of Commons. It is now clear enough that when the Country Party so pleases it can work together with a will and make a way. There are few modern instances of more determined energy than that with which Sir Massey Lopes has, in common parlance, stuck to his point. For some years now he has never left it, while his zeal becoming contagious, he has brought over converts and commanded majorities. Something of a tactician as well as a workman, we commend the example to his fellows, as the moral should be sufficiently obvious. When a man talks, eats, drinks, and does everything but sleep over Local Taxation, he gradually gets a footing and a hearing, as surely the same indomitable industry might be as profitably employed in other directions. Let some other honourable gentleman be straightway enlisted, who, in Westminster or in Salisbury-square, up in town or down about home, during the session or in the recess, shall devote himself as resolutely to the Malt-tax, the Game evil, or the Tenant-Right principle. At one time, indeed, the repeal of the Malt-tax looked to be as much Mr. Sewell Read's mission as the re-adjustment of local

burdens is that of Sir Massey Lopes. It is doubtful, however, whether anything like proportionate success would have attended the effort had it been persevered with, and for this reason—the movement against local rates and taxes is far more of an owner's, either of houses or lands, than it ever can be considered an occupier's business. When Sir Massey Lopes seeks to relieve local rates of the expenses for national purposes not under local control, and when Sir Thomas Acland says the same thing still more directly, they are manifestly showing a case for consideration, but this is the case of a class. During the whole of the debate, save in the speech of the mover of the amendment, the slightest possible reference was made to the tenant either of house or land, the matter being very properly regarded as an owner's question; as, in fact, at times there was an actual desire evinced to keep the tenant and the tenant-farmer more particularly out of court. Thus Sir Massey Lopes said "in his own county the police-rates had been more than doubled in consequence of complying with the wishes of Parliament. The police were now being used for imperial purposes to a greater extent

than formerly; they were now required to distribute notices to recruits, a novelty and a bad precedent;" and so on. But why did not Sir Massey go on to show that the county police force was increased in consequence of Parliament having to comply with the wishes of the country gentlemen, as that the county police were now being used for far more objectionable purposes than serving notices on recruits? But of course this omission was supplied, as, according to Sir Thomas Acland, "it had been said that the police were a perfect institution, and he really thought that in the protection of their stock of game the country gentlemen received considerable benefit from that force. There were, however, a great many people who objected to the police being employed as assistant-gamekeepers, and the question whether they ought to be so employed would probably be raised some day in a very unpleasant way." It really sounds somewhat inconsistent that a body of gentlemen should ask for special services on their own behalf and then complain at having to pay the bill. Why have the county police expenses increased? Because, amongst other duties, the police are employed as watchers and keepers.

Who pays the rates? asks Sir Thomas Acland; and Mr. Sewell Read answers "that no doubt between the landlord and tenant they were paid." But this is not so sufficiently explicit a reply. In the outset, at the commencement of a lease or a tenancy, the landlord pays, on one of the first principles of political economy—that is, the more rates the less rent; while any new taxes in the interim of any new arrangement between them are of course paid by the occupier, an injustice which the Amendment would have gone to remedy. "The theory of the proposition is, that occupiers and owners would be relieved of the two millions transferred from local taxation to the national account. The fact is, that this would be given almost entirely to the owners, while occupiers would not only not be relieved, but would have to pay much more than they pay now. Let the local taxation for these purposes be lessened, and immediately rents would rise to a like extent. Thus the occupier would not be relieved. But he would have to pay his share of the increased national taxation necessary to cover the local burdens which had been transferred." So says *The Scotsman*, and is there any gainsaying this? The most ardent advocates for the transfer of local taxes have at any rate admitted so far that every shilling taken off houses or land in taxes will be forthwith elapped on the tenant again in the shape of increased rent. It is not quite so clear what even the owners will eventually gain by this movement, while the occupiers' interest really seems to

adjust itself. If he does not pay in one way he will in another.

If there were any evidence wanting to show how much this is a landlords' business it might be found in the way in which this has been worked. When did the landlords ever take up a question in which the farmer is really interested, as they have done this, in Quarter Sessions assembled? Then, we are officially informed that "the Local Taxation Committee now numbers one hundred Peers and members of Parliament;" while the only subscriptions of individuals as announced in the April Report of the Local Taxation are from two Dukes, one Earl, one Baronet M.P., and five other members of Parliament. Naturally the names of these honourable gentlemen will be found in the majority of Tuesday night; a list, by the way, which should be carefully studied and preserved, for all these good men who have achieved so signal a victory for the farmer will be wanted again when the Report from the Game-law Committee is presented, when any Tenant-Right measure is introduced, or when it has been really resolved to repeal the Malt-tax.

At the meeting of the Central Chamber of Agriculture on Tuesday, the proceedings commenced with the reading of a resolution from the Suffolk Chamber, reproving the Council for "having allowed another Budget to be brought in, and a handsome surplus to be disposed of without having appointed a deputation to wait on the Chancellor of the Exchequer, and urge him again to repeal the Malt-tax." But then, according to Mr. Biddell, a member of the business committee of the Central Chamber (name!), says "they ought not to bring up the Budget, as that is a political question"! Well might Mr. Biddell be astounded. Still, some allowance should be made, considering how busily the Chamber has been engaged over local taxation, so that any little minor matter like the Malt-tax might reasonably stand over until another session or until there is another surplus. However, there may be a chance of doing something in another direction; for Mr. McNeel Caird proposes to start a TENANT LEAGUE, of which our straightforward contemporary, *The Gardener's Chronicle*, says: "There is no good reason known to us why this should not be, or why, so long as the conduct of such a league is kept within the bounds of justice and reason, to use Mr. McNeel Caird's own words, good and useful work should not be done by it. It has always been, we must confess, a feature in the Chamber of Agriculture organisation, which has, in our opinion, weakened it for useful and trustworthy work in comparison with that of the old Farmers' Club—that it is led so exclusively by landlords."

STOCK-BREEDING.

BY THE NORTHERN FARMER.

The almost unprecedentedly large prices paid for young stock during the past twelve months, and the early demand, scarcity in the markets, and consequent high prices already given, show unmistakably that these prices will, for the present and coming season, not only be sustained, but, in all likelihood, increased, more especially for the better qualities. A powerful incentive will thus be held out to stock-breeders to rear every calf or other young animal included in the category of high-priced stock, whether really worth the trouble and expense of doing so, or the contrary; and many animals will undoubtedly be held over at considerable expense which it would have been more profitable, notwithstanding the high value of cattle, to have sent to the shambles on the first

day they saw the light. Assuming that the breeding stock, dams as well as sires, are moderately well-bred, the insatiable demand at present existing for young animals gives ample encouragement to rear every calf dropped, whatever the sex, excepting only those that present unmistakable symptoms of constitutional debility or unsoundness. Everything decent being so eagerly picked up, there need exist no apprehension on the score of overproduction and crowding of the pastures, as sales can be made at any age and at any time of the year. Calves, for instance, may be profitably parted with from the pail, never requiring to go on the pastures at all, or in any way allowed to interfere with the food provided or general arrangements made for provisioning the permanent stock.

It will at once be seen that such a favourable alteration in the state of the markets confers a highly valued and important boon on the stock-rearing farmer, encouraging him to introduce better blood into his herd, and, by the aid of cake and meals, to rear a larger number of the calves than he has previously been in the habit of doing, and, moreover, to turn them out in much better style from the hands of the dairymaid than before. At this period a calculation may be made as to the probable number the farm will be able to keep during the ensuing winter; that quantity can be sent out to the pastures, and the remainder disposed of—a proceeding about which there is not the slightest difficulty to be apprehended, if the feeding has been attended to even moderately well. It is bad management to hold over a heavy lot, and thus cripple the future resources of the farm by bearing the pastures, as a well-reared calf, unless provided with a full bite of good succulent herbage, rapidly loses condition, and depreciates in value, and, three months after going on the grass, may possibly not be worth what it would have made easily on the day it was taken from the pail. Assuming it to be found necessary to part with a portion of the weanling calves, they will by the end of August be worth £5 each, if of a good sort, and have had their wants supplied from birth even in moderation. This time of year is eminently a suitable one for making such a clearance, as purchasers are just then beginning to pick up stock to occupy the straw-yards during winter, and are only too glad to meet with a lot of well-bred stock, giving more money for young soft animals than for those which, although somewhat older and equally well-bred, have yet the appearance of having been scantily supplied with food while on the pasture, and have in consequence acquired a rather stunted look. If success is to be obtained by the securing of a paying price for the waygoing young cattle, the loss of cellular tissue should be carefully avoided by providing the animals with a regular supply of nutritious food. When the calf flesh has been retained the skin possesses the pliability and fineness of touch so much desired by feeders, and for which they are perfectly satisfied to pay liberally. Neglected calves have a tell-tale gauntness of appearance, and an undue development of the abdominal organs, which months of abundance will fail wholly to overcome, and as a natural consequence when young stock possessing these characteristics are presented at a fair, their owner must sell at a price so much below the current market-rate for superior stock of the same breeding and age as to render the result mortifying in the extreme. When it is attempted to rear a larger number of calves than usual, or possibly than those supplied by the home herd, a few good ones being procured from a source external to the farm, it becomes absolutely imperative to assist the milk with a reasonable proportion of other strengthening food. It serves no useful purpose to keep three young animals on the allowance of two, as although a larger number of heads can be counted the advantage ends there, the two being worth more money at any period of their life, enjoy better health, look creditable on the farm, and in every way give satisfaction, results quite unattainable by the grudging or semi-starvation system. Preparations of linseed form a highly nutritious and exceedingly suitable food for calves, and moreover have the merit of preserving the digestive organs in healthy condition, a matter of great importance, as inflammatory attacks are thus warded off and losses from disease or death reduced to a minimum. Linseed jelly is easily formed by boiling linseed in water and then either removing it to tubs to cool or permitting it to remain in the boiler. When cold it becomes a delightful jelly, and it may either be mixed up in one large tub for a number of calves, or the proportion allowed for each can be put into separate vessels

with the allowance of milk for each, a mode which certainly has the advantage of securing to every animal its proper share. While young enough to be confined to the house, and kept in separate cribs or tied up, the proportion of food can be easily managed, and a small calf or indifferent feeder petted into vigorous growth; but when turned out to a field and fed there, the food must almost unavoidably be given in common, the old and strong generally managing to get the largest share both of the milk and the more solid ingredients, with which it has been mixed. Oilcake ground into meal is easily converted into a muceilage, by pouring boiling water over it, and covering so as to keep in the steam. The flavour is agreeable, and, when mixed with the milk, is eaten with great relish by the animals. Indian meal of fine quality, when well boiled, is also an excellent auxiliary food for calves, and with its aid a large number of calves may be reared with but comparatively a very short supply of milk. Damaged meal is of no use for this purpose, and should be rigidly excluded, the variety known as Galatz when sweet and fresh being the most suitable. It must be given cautiously at first; but after a week or so the stomach will bear all that may reasonably be given, without being sensibly affected, and condition will be acquired very rapidly. Under any circumstances, milk must of course be relied on, as the principal source of food during the first weeks of the young animal's existence; but after that the foods noticed will afford great assistance, and enable the breeder to increase his number considerably, and at the same time have good cattle fit to turn into cash at any season of the year. It is evident from the very high price of stock that the turn is completely in favour of the breeder, the extraordinary value of stores being altogether out of proportion to the present price of beef, which, allowing for the advanced stage of the year which has now been reached, must be looked upon as cheap, and that not in any particular district, but in all the leading markets of the kingdom. Considering the very high rates given for stores last autumn, many feeders will consider themselves well off if they stand clear after all expenses are deducted. Certainly, every effort will be made to obviate in whole or in part the depreciating result which becomes altogether unavoidable when cattle are cleared out at a period of depression, by holding for some time after the animals have become ripe for the butcher. Even should the owner of fat stock be so fortunate as to realize a better price by over-holding—a result, however, highly problematical—he scarcely ever finds himself in a better position financially, the food resources of the farm being seriously trespassed on, and the additional money absorbed in a great measure by the extra quantity of cake and corn, which must of necessity be consumed. To bring out young cattle in healthy, saleable condition in the spring, it is highly important that much of their time should have been spent in the open air, the exercise promoting digestion, and materially assisting growth, besides lessening the tendency to joint disease, so frequently exhibited by young quick-growing animals when kept in a fixed position for a protracted period, the exercise which they have an opportunity of taking when loose promoting the secretion and diffusion of the synovial fluid. They also preserve the hair till a late period of the season, always a desirable object in connection with young cattle, as it renders the skin impervious to wind and rain, giving the animals the shelter which Nature designed them to have, and thus enabling them to withstand without the slightest suffering or injury to health the rough spring blasts of a northern climate. To enjoy exercise in the open air it is by no means necessary that the cattle should be turned out to the fields during the winter months, the districts where such a course can be followed with im-

punity being exceptional, but the necessity is fully met by the comforts and conveniences afforded by a well sheltered and properly constructed straw-yard. To be thoroughly healthful and comfortable it is imperative that it should be free from cutting draughts, and protected sufficiently from prevailing high winds, and such a portion of it shedded as will afford ample accommodation to the whole of the animals without undue crowding. Young growing stock do not appear to suffer to an appreciable extent from mere intensity of cold, healthy progress being ensured by sound food in moderate abundance, and shelter from cold rains and chilling blasts. There are few practical men but have noticed on a winter's morning the occupants of the straw-yard quietly reposing half in and half out of the shed, that part of their body which was outside very possibly covered with snow, while the poor beast kept placidly ruminating, the very picture of ease, comfort, and healthy contentment. In economical consumption of food, and suitability to the necessities of the animal economy, and for the effectual collection and preservation of the manurial constituents, so necessary for the profitable production of future crops, there cannot be the shadow of a doubt but that the system of keeping young cattle over the winter in yards, shedded either entirely or partially, is much the most profitable for the farmer, and having for its primary object the preservation of the stock in constitutional comfort, the principle has the additional merit of being supported by the dictates of sound reason and common sense. In improving the breeds of cattle, and aiming at bringing only such calves into the world as are possessed of the necessary bone and substance and kindliness of feeding quality so essential to their having a likelihood of being able to repay both breeder and feeder for their trouble and outlay, most men are now agreed as to the supreme influence possessed by the sire when purely bred, in propagating the hereditary qualities of his race. Even when labouring under the immense disadvantage of being mated with females of small size, coarse make, and inferior breeding, he succeeds in imparting a certain fixity of type to his progeny, which becomes so far valuable, as it enables men in backward or needy circumstances to gradually improve their stock of cattle, by continually imparting pure blood through the sire, until the animals have attained the size and quality that the soil on which they are kept is capable of sustaining. These however are the only conditions where a violent cross, as described, becomes permissible, as the improvement in the first instance is more apparent than real, the pliability of the skin being certainly vastly improved, and the points rendered much more susceptible of showing condition after a period of full feeding; but the carcass is still light, the contour of the frame being rugged, preserving in a great degree the angles and inequalities which were distinguishing characteristics in the conformation of the mother. The improvement is much more distinctly marked, and at the same time more usefully, when the dams are of good form and considerable substance, and are of the same distinctive breed as the sire to the extent of half or three-quarters, although not necessarily of the same family. Such a union gives the breeder a good start, the stock which issue from it being really worth the trouble of rearing well, and from the earlier stages of their growth holding out a promise of ample remuneration, which will not be disappointed if the necessary conditions relating to food and shelter are fulfilled by their owner. Should it so happen that a farmer retains a herd of cattle, which, although at one time both suitable and profitable in the district, has become through improvements effected on the farm by draining, manuring, and high feeding, too small of carcass to pay for the increased expenditure, it is better to get rid of them at once either by auction or private

sale, and substitute for them a breed more useful, more valuable, and easier of sale. The improvement effected by the sire, although admittedly great, is yet too slow to meet the views and requirements of a man of capital, the assistance of well-bred mothers of the desired breed, or at least good crosses must be obtained, when the new and improved stock is without loss of time started on a sound basis, and a sure, handsome, and worthily-earned percentage obtained on the extra capital invested in making the change. For a practical illustration of the value of good blood in the stock of an ordinary farmer, take the sale of say two cows that have missed calf, and are at this season of the year taken to a fair to be sold to a grazier to be fattened on good grass land during the summer months. Both have been reared on the same farm, in the same year, got the same treatment as calves, and at every succeeding stage they have been well treated during the past winter, more especially so on account of the milk they were yielding at a scarce time, and are in consequence in good saleable condition. I shall further assume that both are by one sire and he pure-bred, but that one was out of a square substantial cow moderately well bred, and the other out of a light cow of inferior form, narrow across the loins, and either it may be a pure specimen of some small breed, or an indifferent cross. When exposed for sale the price of the beast from the superior dam is asked before they have had time to take up their position in the market, while her comrade is as silently passed over as if her presence was not recognised. The owner, however, I will suppose, has the good sense not to separate them, and eventually they are sold together by a struggle, the buyer declaring that he only takes the middling one for the sake of getting that which really suits him, the difference in actual money value being probably not less than five pounds. Every practical man will at once acknowledge the truth of this picture, and the value of the inference which it is intended to convey. The science of stock-breeding is much more abstruse than might readily be imagined by taking merely a cursory view of the subject, hence the small number of men who have been distinguished in the history of agriculture as the founder of a distinct breed, or even an offshoot or family from any existing breed which, possessing hereditary qualities sufficiently developed in the strain to give a fixity of type, was acknowledged as valuable by the agricultural public, and perpetuated accordingly. Unfortunately it is but too common to see wealthy men giving large sums for highly bred animals of both sexes, of some fashionable breed, so as to form the nucleus of a stock which the owner destines for the *time being* shall become celebrated. For a number of years the herd is kept up at great expense, but for want of a correct knowledge of comparative physiology, and consequent inability to pursue a fixed system which will conduce to improve the already valuable qualities of the stock, the high prices which were given for the parents are not sustained when the offspring come to be sold, and the herd in consequence becomes a source of loss instead of profit. As few men care about, or take an interest in any business which is not self-supporting, shortly after it has been ascertained that the balance is on the wrong side, a public sale is announced, and the entire herd is dispersed under the hammer of the auctioneer, the owner again adopting the humbler but more certain style of breeding pursued by ordinary farmers. If, however, few men can lead, all, if willing, can follow, and self-interest ought to be sufficiently strong in every man who breeds cattle, to induce him to patronise, in so far as his means will allow him, those breeders who show by continued success that they possess taste, judgment, and practical skill. I can conceive of no better investment on the part of farmers who every year rear a considerable number of calves, than the purchase of a bull from a celebrated herd.

WINFRITH FARMERS' CLUB.

TILLAGE AND SOIL.

At the last monthly meeting a paper was read by Mr. George Groves, of Milborne St. Andrew, on the Difference in Soil and Tillage of Dorset and Hants.

Mr. GROVES said, I shall confine my remarks to the neighbourhood of Christchurch, in Hampshire, and to their mode of cultivation twenty-five years ago, that being the time I lived there. It is, I have no doubt, very much improved since that time. It is a large parish, about eleven miles long by nine wide, and it has a variety of soils, from the land that will blow in summer like drifted snow to the very deep strong land that requires from three to four horses to plough it. I will first speak of the light sandy soil. The best thing to consolidate it is ten to twelve tons of chalk per acre. If you put twenty tons per acre you would injure the land for several years. There is more than one advantage derived from the application of chalk; you not only consolidate your land, but you prevent club-rooting in the turnips grown on it after chalking, and destroy a great many annual seeds, as Botham and Shepherd's Pouch, to which this land is very subject. It never requires more than two horses to plough it, and in cleaning the fallows we used the double-turn-furrow plough with three horses in it, with which we average three acres per day, or an acre and a-half for each turn-furrow. There being scarcely any thistles or knap-weeds much larger furrows are taken than on land which is subject to these weeds. This description of land is generally managed on the four-course system—wheat, turnips, barley, hay. Sometimes the hay-stubble is broken up, and put into turnips; and as the land is so kind for roots, I have seen splendid crops without superphosphate or any other manure. It is then put into spring wheat or some Lent corn crop as a change. Now in ploughing hay-stubble I have found it wear out more points than any land on which I have had any experience which is owing to its gritty nature. It wears out as much as one point per day. In breaking up the ley for wheat we never thought of raftering, as it made the land too porous and light. Raftering, I believe, to be injurious even in cleaning a foul piece of land, as the short pieces of couch will be so mixed with the soil that no amount of fine weather will kill it. In the cultivation of barley, when the land has worked so unkindly as it does this year, I have many times nine-shared it over again after the barley has sprouted. I have drilled the corn and finished it off; but finding the land too light after the grain has sprouted have torn it up with the nine-share, and dressed it down again with the best result. When my father left Avon in 1827 the incoming tenant ploughed the land much deeper than we did, and my father thought that he had

Better be asleep

Than plough so deep;

but I have lived long enough to see what poor Richard wrote is correct:

Plough deep while sluggards sleep,

And you shall have corn to sell and to keep.

At the present time Mr. Whicher, of Avon, ploughs his land seven inches deep for wheat, the manure being pulled out several weeks before to grow into the land. The sheepfold does a great deal of harm during the summer months, as this land grows nothing but weeds after. To return to the cleaning of the land, we found the Finlayson's harrow a very good implement. It would not do to dress it too much when it was so very loose, as the couch would work in instead of out of the land. We never wanted anything to consolidate the wheat land, as the rain in winter would get it firm enough. There being a sort of crust formed over the soil in the spring, hoeing worked wonders, but it was then an expensive operation. There is now such a great improvement in the horse hoes; an old neighbour of mine told me that instead of paying 4s. or 5s. per acre, as he used to do he could now do fifteen acres a day with two old hack horses. This, we must all admit, can be done at a very trifling expense. Where the land is hilly it stands at a great disadvantage for hoeing, as the lower part will go so deep and the upper part barely touch, I recollect

when bones were first used in the neighbourhood. We had no drill, but sowed them out of a seedlip, sowing them on every other ridge. The result was very marked. Now for the strong land. The best mineral I ever found for that was marl. It is a sort of clay dug in the New Forest from the very poorest soil I know. We used to put it on the land in the autumn so that the frost may slack it. When it is thus pulverised it can be much more evenly distributed and its action is more beneficial. We put on from twenty to twenty-five tons per acre. The crops told of its application for more than twenty years. The cropping on the strong land was much the same as on the light land, only a summer fallow instead of turnips. Now, gentlemen, you must excuse me for being such an old-fashioned fellow as to think that a good deep fallow ploughed at least four times in the summer will, on the average of seasons, grow a better piece of wheat than after turnips, rape, or anything else. I used to think it assisted the tillage of the fallow land very much if the wheat, instead of being hewn or mown was reaped very high, as it would make it work so very mellow. With the reaping-machines you can leave the stubble six inches high, but I have found if you go very much higher the sheaf will not be thrown out so evenly. Now for the meadow land. The river Avon rises above Salisbury, and from Fording-bridge to Christchurch, fifteen miles, the meadows are very poor, so much so that the stock fed on the hay become covered with lice. The rivers Avon and Stour join just below Christchurch; about one and a half mile before they empty themselves into the sea. Now this poorness of the land watered by the Avon I attribute to that stream rising, or being fed, from heath land; and it is a very strange thing that when the Stour is frozen over on the top enough to bear a man on horseback, the Avon is not frozen on the top but at the bottom, and the ice is just about the same thickness as the ice on the Stour; and when there is a thaw it will break up exactly at the same time as the other. It has often puzzled me to know the cause. Now the river Stour, which you all know runs close to Blandford, has very much better meadows from there to Christchurch than from Salisbury to Christchurch, the latter being watered by the Avon. Even the fish find the difference in the waters of these rivers. Sometimes in a high tide from the sea the jack will be killed two miles up the Stour, but not in the Avon. The eels are much better eating from the Avon than from the Stour. I have heard that, many years ago, the salmon were so plentiful in the river Avon that one stipulation made by the labourers with the farmers when they entered service was that they should not have red fish oftener than twice-a-week. And I believe that they would be just as plentiful now if they would do away with the corn mills. I have seen the salmon spawning. They move the small stones with their noses and tails until one fish will sometimes get an accumulation of two or three cartloads in one heap under which the spawn is buried. These mills prevent the salmon from going up to spawn, and the eel stages catch the small ones as they journey down to the sea. When Sir Walter Tyrrel shot Rufus in the New Forest, in his flight he made his escape over the farm now held by Mr. H. Boue, and afterwards over the river Avon. From that time it has been called Tyrrel's Ford, and a fine of a few shillings was inflicted by the Crown on all who may hold that part of the river. I am aware that this is a digression from my subject, but I thought the matter interesting and may be new to some of you. As regards the soil and tillage in Dorset it is, perhaps, best for me to leave it in your hands as you know as much, and probably more about it than I do myself. But one thing is indispensable to good tillage, and that is to have the best and most improved implements. We never hear anything about the Bentall now since Bartlett, of Wimborne, has brought out a better, and at the same time a lighter implement. There is another implement in this neighbourhood for pulverizing the soil. I cannot think how any farmer can be without it—this is what I term the rubber. If it cost as many pounds as it does shillings; in fact, if it was dear bought and far-fetched, every one would have it. There are so many other implements

that it is difficult to tell which is the best; but, in my opinion, if you wish to move the land effectually there is nothing like the plough. I think, if you wish to save yourself a deal of trouble and labour in cleaning your fallows for turnips, you must not be in too great a hurry to dress it after it is ploughed, nor to plough it too quickly after it is couched, as it is the small pieces which the couch-rake will not take. Being ploughed in again they grow and undo much which has been done. After the chain-harrow the common harrow should be used, so that the sun may dry up the couch before it is ploughed in again. I have never used the steam plough, but from what I have seen of it it ought to be dressed out directly after or it will grow again, unless it is very dry weather. Autumn cultivation is all very well in fine weather, but almost useless in wet. As regards breaking of stubbles, if your land is ever so clean, I should advise a rafter as it makes the land so much more mellow the following summer, consequently better for any roots you may think proper to put in. The Scotch system is in favour with some in this county; but I am of opinion that, from six o'clock till two, horses, if they are properly kept at work, will do a very good day's work, and if you keep them more than eight hours at work it is the horse-dealer who reaps the benefit and not you.

Mr. J. A. DAMEN knew but very little of the mode of farming in Hants, but he could quite understand that it was not desirable to knock about the light lands there too much. On the sandy land of Dorset they would find that if they were heavy they got no wheat. They wanted more staple in the land, and for that purpose ought to fold sheep and lay on as much manure as possible. So far as the implements were concerned, he must say he could not agree with Mr. Groves that they ought to avail themselves of every new invention. He thought that if they lived long enough they would find many of the old implements brought into use again. He was now going back to the old Dorset drag, and he believed the old wood harrow was the best implement for working land for all purposes. It was true the modern harrow left a beautiful surface, but it did not do its work so well as he wished, and he should therefore return to the old wooden one. He attended the sale at Mr. Farquharson's farm, and there found that the Scotchman who managed it bore out his opinion as to the advantage of having these old-fashioned implements, and he thought everyone would give him credit for managing the farm well in that district.

Mr. MARKE said the principal part of his arable land was very strong. If he could afford it he should like to summer fallow all his land for wheat, and to use a fair proportion of lime. He thought lime upon strong land was a most valuable manure as it pulverised the soil so effectually. He had used some, and for six or eight years afterwards he could find the benefit of it where he had lived. Two years ago they had a very dry summer, and the consequence was that the seeds were very bad. In the spring of 1870 he limed a piece of strong land, about 26 acres, for barley. He sowed the barley, and ploughed in the lime. He had no grass seed worth putting an hurdle on with the exception of that piece, and there he had a very fair plot; in fact so good that he was able to cut a crop of hay last summer, and to save the seeds. He could only attribute that result to the lime he had used. He used about 40 sacks to an acre. As regarded the management of the hill land, he might say that as the harvest was so late it was a difficult matter to do much in autumn cultivation unless they had a season on purpose. In the autumn of 1870 they could do something, but in that of 1871 they could do nothing; in fact worse than nothing, for those who attempted to do anything last summer in cleaning their hill land made the couch grow. He quite agreed with Mr. Groves that rafting was the best plan they could adopt in cases where land was strong and the harvest late. The plan he adopted when he had much couch was to raft first of all, and, before Christmas, if the couch was dry enough, to plough it in, then raft and turn it over again, leaving the land to dry during the winter, and in the spring the land could be worked a fortnight or three weeks later. He thought no land would pay better for manure than grass land. Let sheep be kept on corn land as much as possible, giving them plenty of artificials, but where there was a large portion of grass land he advocated the using of good farm-yard manure. Adverting to the piece of barley ground which he had limed, he said perhaps some people would like to know what crop he had of grain and stubble, as that summer was

such a dry one. People might think that lime dried the land too much, and that he did not have much straw or corn, but he could assure them that the straw was more than an average crop, and the barley was some of the best quality on his farm.

Mr. SLY said that most of the land he had under tillage was invested with bogs, so that deep ploughing was impossible, but he had always found that to answer the best. He had chalked six acres of land, with about 20 loads per acre, leaving one half-acre unchalked to see the difference. He planted mangold, and had a very good crop where he chalked—some of the roots being as big round as his body—while those in the unchalked piece were about the size of a hen's egg. He believed rafting was the best way of disposing of couch. Speaking about salmon, he said mills did not obstruct or injure fish, but the bog water poisoned all that came near it. If ever they hoped to get salmon in the Frome there ought to be a drain on each side of the hill to carry off the bog-water into the sea.

Mr. RANDALL knew nothing about the Hampshire mode of farming, but was acquainted with that of Dorset. Mr. Groves had spoken of rafting land. Some people thought the best way was to raft and roll, and raft again. His plan was to raft, dress fine, raft across, dress again, and plough deep.

The CHAIRMAN was not a great advocate for rafting; he preferred ploughing the couch in deep, and letting it remain to rot. The farming of Hants and Dorset differed very much. He thought that in many parts of Hampshire sheep threw much better than in Dorset, whether it was owing to the climate he could not say. Then again in Hampshire sainfoin was grown, which could not be grown so well in Dorset. He quite agreed with Mr. Groves as to chalking land. He thought it possible that in land of a sandy nature the use of too much chalk would prove injurious. As to the use of implements, they ought to avail themselves of the best which could be had. There were many places in which the double plough might be used with advantage, but where it had not been introduced. On many farms the old wood-tackle answered much better than the new implements, which simply went over the surface, and did not give deep tillage. He could not say much about marling laud. If they could get rid of the heath-water they would be better off without it than with it. When fish did not thrive in a stream where heath-water discharged itself, it showed there was something in it they did not like, and he had no doubt it was injurious to vegetation as well. The day was come when it was the duty of agriculturists to grow as much as they possibly could, and this could not be done unless they had good manures; and he thought they could not do better than to use those which had been well tried. He believed the time was come when manufacturers ought to be required to give some guarantee of the manures they sold, as then farmers would know what they were buying.

Mr. SLY mentioned an instance of where an ox died in a few hours from drinking bog-water.

Mr. GROVES was sorry all the Club had agreed with him so well, as they had not given him room to say much more. There were many things which kept a farmer's nose down, but the greatest curse was that of game. He had had reason to say this many years ago, but he was thankful he now rented under a landlord who was very liberal in that respect, allowing him the shooting over his farm. As to an observation that rabbits would not eat beans, he was not aware that there was anything which the "villains" would not eat, and he was very pleased indeed now to find that there was something. He wished to ask Mr. Sly what sort of beans he planted—winter beans, spring beans, or French beans. For the last two years he had planted broad beans upon a small scale, and had now increased the crop to six acres. He believed that a better crop could be got from the broad Windsor bean than from any other kind. He quite agreed with Mr. Randall in rafting land in Dorset twice and ploughing the couch in deep, believing that if the land was strong there would not be much trouble with it afterwards. Their chairman had said that manures ought to be guaranteed, and he quite agreed with him. If Farmers' Clubs had done no other good they had done this—they had brought a better class of manure into their neighbourhoods since they had got them analysed. Although larger crops of swedes could be grown in Hampshire than in Dorset, he doubted very much if the quality was anything like so good. Of this, however, he was sure, that if they could be grown without manure they would be much better in quality.

A vote of thanks was passed to Mr. Groves.

DORCHESTER FARMERS' CLUB.

THE ANALYSIS OF MANURES.

At the closing meeting of the session, the vice-president, Mr. R. Genge, in the chair,

Mr. W. C. SPOONER had thought that the announcement of the subject would have certainly excited some little interest at this period of the year, because every farmer must acknowledge that for the average of seasons agriculturists were very much indebted to phosphates—of which he (Mr. Spooner) was about to speak that evening. But he supposed that owing to the great luxuriance of the crops, the mildness of the season, and the superabundance of feed, cultivators were rather disgusted, and were beginning to think that their requirements would have been met if they had not had these phosphates. Although by no means agreeing with the doctrine that it was necessary all farmers should be chemists, yet he could not help thinking that any small amount of knowledge gained from a single lecture on some subject bordering on chemistry, or rather allied to both chemistry and agriculture, must be of some value, if even it only set minds thinking and turning over the subject during leisure time at home. With this view, and considering the time of the year, he had thought that the subject of phosphates would be acceptable to the Club. It would be a matter of some little interest to give a short cursory account of the introduction of different manures, and the wonderful change it had made in the pursuit of farming. Prior to the present century, everything relating to cause and effect, the why and wherefore, was completely dark and a mystery, and for some years any attempt at elucidation only served, like a will-o'-the-wisp, to lead astray. Chemists were then in possession of very few facts, and reasoning from those and without others afterwards discovered, their minds were naturally led astray; their writings in many instances leading others wrong as well. Long after the importance of bones as a manure for swedes and turnips became first known it was a matter of doubt as to which part of the constituents the benefit manifested was principally due. It was very true that turnips, swedes, and other crops grown but sparingly at that time would grow in many instances as well without manures as they had since with them; but that was because of the long intervals of rest between the cultivation of the crops. It was generally considered by chemists that the benefit was derived chiefly from the animal or nitrogenous part of the bones. They were led to this view of the case from finding that the percentage of phosphate of lime found in turnips was comparatively small and less than in wheat and other cereals. When the dogma was attempted to be introduced by chemists, and which he (Mr. Spooner) had always opposed from the earliest days in which he paid attention to the subject, viz., that the principles of manuring should be to supply those constituents which analysis showed were taken away by the crops, it was held as a sort of sub-theory, "Phosphates for grain, ammonia for roots." But Nature had rebuked both those theories. Science had stepped in explaining the why and the wherefore, and chemists were sent back to their books again; for it was found in practice that the art of manuring was to supply that manure which would produce the best crops. So far from phosphate for grain and ammonia for roots being the correct thing it was just the contrary. It was in the early part of the present century that bones were introduced into the north of England; then it was extended to the south, he believed, about the year 1820. Some years afterwards a great revolution took place, for about the same time that Peruvian guano was introduced and many other guanos were brought over, the use of super-phosphate was discovered. Peruvian guano, although for a great many years previous to its introduction into this country had been applied in the neighbourhood where it was discovered, Peru, yet it did not at first become a matter of commerce, for but a small quantity was brought over, which was sold at £20 per ton. He could mention several varieties that were introduced, and observed that during the period in question the use of manufactured superphosphate of lime was not adopted to a great extent. A great many

years ago he had in a little box a sample of one of the guanos; he was showing it to a friend in the High-street, Southampton, when some other friend, who was an inveterate snuff-taker, displayed the spirit of freemasonry by taking a tremendous pinch, enough for four sniffs, after which he said he would not give 1s. a-pound for it, for it was nothing but common Scotch, and for aught he (Mr. Spooner) knew to the contrary that gentleman went to his grave with the impression that he had had on the occasion mentioned a pinch of very inferior snuff. That circumstance did not say much for the power of discernment which persons possessed when habituated to taking snuff. Guanos were much used, and were of very great utility, one reason being that the phosphates were in a much more soluble state than when found in bones and other materials. After they had been pretty well used up the discovery of phosphates took place in various parts of the world. Previous to this coprolites were discovered in several places, amongst them Suffolk and Cambridgeshire. He would here exhibit a specimen of the Suffolk coprolite. It was supposed to be the remains of some antediluvian animal, the appearance of a rib being very defined. There could not, he thought, be any doubt as to its being the bone of one of the extinct animals. These coprolites were found in large quantities. A specimen which he exhibited contained, he said, 50 per cent. of phosphate of lime, while in the Cambridgeshire coprolite it was 60 per cent. They were used to a very large extent with bones; but soon afterwards other more valuable phosphates were discovered. German phosphate (from Germany), containing from 65 to 70 per cent. of phosphate of lime was introduced. Then there were very rich Spanish phosphates containing from 70 to 80 per cent. Such phosphates were found in Estremadura; these were taken to Lisbon and then shipped. Still more valuable specimens came from Sombbrero, an island of the West Indies. One of the latter was shown; it contained apparently a large number of shells. This had something like 70 per cent. of phosphate of lime, sometimes more, according to the freedom from water or otherwise. It would thus be seen that there was a considerable difference in the value of phosphates. That very interesting substance now in question, found by the Americans, was used in considerable quantities; it was first ground up in New York in order to renovate the exhausted soils of the Southern States. When the British flag was hoisted and the island was shown to be one of our possessions, some thousands of tons were brought over; he himself had used a considerable quantity, because it had the great advantage of being free from silica, and the phosphate was of an extremely valuable kind. It was an interesting fact of which, perhaps, they were not aware, that most of our lucifer matches were made from this rock from the island of Sombbrero; it was reduced to a liquid, then filtered and evaporated, and the phosphorus was then made from it. He could not help thinking it was in a remote measure attributable to that rock that we had to pay 2d. in the £ more income-tax, for in consequence of the matchmakers frightening Mr. Lowe he withdrew the match-tax and put 2d. more on the income-tax. He should always think of that when he saw Sombbrero phosphate. There were other sources from which phosphates came; in Norway there was a good specimen, but its importance into this country had ceased to be profitable. There was guano from Navassa, in the West Indies, which was similar to the German phosphate, and contained from 65 to 70 per cent. of phosphate of lime. The variety of sources from which phosphates could be obtained was very fortunate, because it was impossible that bones could supply—he was going to say one-tenth—at any rate one-quarter the demand for phosphate. A considerable quantity of burnt bone had been imported from South America; this was very valuable. The bones were used as fuel and the fat extracted from the carcasses. The importance of the phosphate was shown by its entering into the composition of all animal bodies, and gave stability to

the bones, that in its deficiency children were rickety and unhealthy. It also fulfilled to a great extent the same purpose in plants, it mainly assisted in forming their skeleton and largely contributed to their utility as food for animals. It could not, therefore, be surprising to find that it was an important element in the supply of plant food, and particularly in the form of artificial manures. Phosphate of lime was present in almost all soils, but in very small quantities and in a comparatively insoluble, or rather in a sparingly soluble state. In the few instances where it abounds, as in the green sand, the soil is so enriched with it that the addition of phosphate of lime in manures has no sensible effect. This showed how wrong it is to state that insoluble phosphate is of no value. The presence of minute quantities of phosphate of lime in most soils is in striking contrast to the presence of potash, which is found wherever alumina is present, and exists to a much larger extent in most soils than does phosphate of lime. In some soils there is no less than four to six tons to the acre, reckoned only to the depth of five inches. This readily explains the fact that the direct application of potash is by no means attended with the same success as that of phosphate of lime, although in the ashes of most plants potash is found existing to a much larger extent, and is consequently taken up in the produce in a much larger degree. In the crust of the earth, which forms the cultivated soil, potash is found to a very large extent, whilst phosphate of lime exists much more sparingly. On the other hand, in the various sources of supply furnished by rocks or natural salts, potash is only present to a very moderate degree; thus kainit or potash salts, almost the only natural supply, only exists to the amount of about 13 or 14 per cent., whilst phosphate of lime is found in various rocks and fossils in such abundance as from 50 to 80 per cent. [Mr. Spooner exhibited examples of phosphates containing large per-centages.] These were consequently available for manufacturing purposes; if it were only found to the same extent as potash is found in kainit it would be useless for the purposes of manufacturing. In the crust of the earth altogether potash is far more abundant than phosphate of lime, for besides its presence in such prevalent rocks as granite and felspar, it exists in soils to a far greater extent. Thus, on looking over some analyses of soils he found, calculating a depth of five inches, which would give about 500 tons to the acre, potash to the amount of four and six tons, whilst phosphoric acid on the same soils he only found at the rate of one-third or one-fourth of a ton. Then it should be borne in mind that although some potash is carried away in the carcasses of animals, by far the larger portion is returned in the dung, whilst with phosphate of lime a considerable portion is carried away in the bones of animals. In a rotation of four crops the potash taken away is restored by the 20 tons of dung that is usually given during this period, for dung contains nearly as much potash as phosphate of lime, so that 20 tons contains nearly 3 cwt. of either constituent. Bone earth was a tribasic phosphate composed of lime and phosphoric acid; but the latter was not a simple body, seeing that it was composed of phosphorus, an inflammable metal, and the gas oxygen which formed the vital part of air, and which abounded throughout nature. Agricultural chemists had been puzzled very much, particularly in the early days of the science. For instance, they found in the ashes of turnips a much greater quantity of potash than of phosphorus, and they jumped to the conclusion that the former was the essential manure until practice proved the contrary. Now the ordinary state in which the phosphates are found in soils and rocks is that of a tribasic—that is, that one part of phosphoric acid is united to three parts or equivalents of lime, and in this state it is fortunately insoluble, otherwise a portion would be washed away by every rain. Before, therefore, it can become food for plants it is necessary that this insolubility should be reduced, and this is done by means of the carbonic and other vegetable acids that are to be found in the soil. In the preparation of superphosphate of lime a very strong acid is used, such as sulphuric, which is the strongest acid known; and the effect of this is that after a certain portion has acted on the carbonate of lime, uniting with the latter and setting free the former, which is the cause of the strong ebullition or boiling up we observe, the remainder of the acid decomposed the phosphate of lime—that is, unites with two parts of lime out of three, leaving the one part combined with the whole of the phosphoric acid. We have as the result sulphate of lime or gypsum from the union of the sul-

phuric acid and the lime, which is only of moderate value, and is comparatively insoluble; and we have also the more valuable acid phosphate of lime, the peculiarity of which is that it is perfectly soluble, and to which the value of the manure is principally due. There is, however, some portion of the phosphate of lime not dissolved, because if sufficient acid were used to dissolve the whole of the phosphate, the manure would be too wet, and would require the addition of drying materials, which would add to the weight without adding to the value. Well, when superphosphate was first applied to the soil it was naturally thought that its benefit was due to its solubility. It was found, however, that the soils which benefited most by its use were those which most quickly rendered the superphosphate comparatively insoluble, such as those in which carbonate of lime abounded, and which quickly united with the acid. The good effect of superphosphate was due chiefly to the infinite divisibility of the phosphate of lime, which even when precipitated in the soil became reduced and divided to an infinitely greater extent than any mechanical means could accomplish, besides which the solubility of the phosphate in the first instance caused the rain to distribute it through the soil, where it met the carbonate of lime, by which it again became reduced. Its own connection with guanos and superphosphates, which had greatly increased the resources of agriculture, was of some considerable duration. In the year 1844 he was making some experiments, with regard to superphosphate, on a little farm which he held, and he paid considerable attention to the subject. The same year the Royal Agricultural Society offered a prize for the best essay on the use of acid and bones, for the term "superphosphate" was not adopted at that period. He contended for the prize, and was fortunate enough to win it. He received letters on the subject from many persons in different parts of the country. The first mode of manufacture was of a very rough description. A cask of treacle mistaken for superphosphate, and the sweet liquid, pronounced to be "the real thing itself," being applied instead of the manure to the soil. That was about the first mistake made; he did not know that it was the last. Great improvement in the manufacture had since taken place. He had no fault to find with the analysis except that from some cause, accident or carelessness, their own (Messrs. Spooner's) standard article, of which they sold ten times the quantity of any other manure they vended, was not analysed at all, but in its stead the mixture of rough bones and acid similar to that first made, or that which farmers often prepare themselves; and although its composition is excellent, and its results always good, it is not a good mechanical mixture, and if analysed and valued as superphosphate it will be under estimated. That was unfortunate for them. He recommended that on another occasion the real standard article as supplied by the manufacturers should be tested, and that if there were any others explanations should be submitted to the chemist. With regard to the values attached to the manures by the analytical chemists, he thought that if less importance were attached to that the better it would be. Their (Messrs. Spooner's) standard article, the bone superphosphate, had been analysed many times, and he could justly say that in two instances out of three it had stood the highest on the list of the published analyses. He submitted that the chemists had first to ascertain the cost from the manufacturers, as they knew nothing themselves about the prices; therefore the figures which they give were unreliable, and calculated to mislead. He suggested that members of Farmers' Clubs should be able to understand and estimate an analysis for themselves.

Mr. CHAPMAN SAUNDERS said they all knew well enough that as a rule they could not do without phosphates; but he might mention that he had seen roots as large as a jug grown this year without any manure whatever—he referred to a piece of swedes, not less than 25 tons per acre, in the neighbourhood of Christchurch. But then that practice would not answer always, especially in this part of the country. Mr. Spooner had said so much on the subject of phosphates that it was unnecessary to dwell upon it. He would, however, offer a few remarks on the question of analysing manures, for the responsibilities of the analysis which had recently taken place under the auspices of the Club rested upon himself. He was sorry that Messrs. Spooner's superphosphate was not included in the manures sent for analysis; but that was explained by the simple fact that it was not entered, inasmuch as he did not receive a specimen from anybody. He did not agree with

Mr. Spooner with respect to the valuation of manures. It was most essential, he considered, that the chemists should put the values upon them, for there were very few farmers who understood them so well as the chemists. The latter found out the different constituents, and therefore were the best informed, being enabled more fully and fairly than the farmer to fix the values. When farmers became well versed in chemistry the case would of course be different.

Mr. SAUNDERS, sen.: The time has come when every farmer ought to be a chemist.

Mr. GENGE said he was glad that Mr. Spooner had been afforded the opportunity of expressing his ideas with respect to the analysis made for the club; for he (Mr. Spooner) thought—and perhaps he had good ground for thinking so—that his firm had hardly had justice done to them. He did not agree with Mr. Spooner that the question of value should be left out entirely by the chemist. It was becoming a practice in the present day (one which he hoped would be fostered) for manure merchants to send a guaranteed analysis with the manure supplied. If farmers could, from reading such analysis, judge whether the manure was good, it would be of great advantage. Mr. Spooner, he thought, would agree with him that such knowledge would be of great benefit. He (Mr. Genge) could see no unfairness in the chemist putting value upon the manures which he analysed, especially as they were selected with the greatest impartiality. To analyse a manure prepared for the purpose would hardly be fair.

Mr. SPOONER: Take some standard article—our manure that was analysed was not such.

Mr. GENGE: It was unfortunate that your dissolved bone, and not your superphosphate, was sent.

Mr. SPOONER regarded the fat in bones of very little value indeed to the soil. Respecting the good swedes grown without manure, it was on land in which phosphates abounded, and it was an exception to the rule, and if persons followed exceptions instead of rules they would probably in the long-run make mistakes. As to the values of manures attached by the analytical chemists, he would ask whether one did not, in the recent analysis, value a certain manure at double the figure given by another chemist.

Mr. CHAPMAN SAUNDERS observed that was hardly the case, and explained that while one chemist valued the manure in question at 10s., the other put the value at "less than" 30s.

Mr. SPOONER said that was sufficient to show the looseness with which the valuations were often made in the chemical laboratory. For his own part, he should not apply to a physician to decide a question of law, nor if he was sick should he go to a judge or barrister.

The argument of Mr. Spooner was disputed, but he made still further remarks in upholding it, submitting that in the valuation given by some chemists, although refused to be given by others, they required so much explanation, and were so apt to mislead, that the evil, as a rule, preponderated over the good.

A vote of thanks was passed to Mr. Spooner.

BRECONSHIRE CHAMBER OF AGRICULTURE.

THE POOR LAW.

At the last monthly meeting the Rev. Garnous Williams presided.

The SECRETARY reported that he had gone through the books, with a view to ascertaining the financial position of the Chamber, and had found that there were arrears of subscriptions out-standing amounting to £56 10s., in respect of the year 1871, and for 1872, £29 5s., or a total of £85 15s., of which he had since received the sum of £6 15s. There must of necessity be a large portion of the amount mentioned which never would and never could be got in; and he suggested that a small committee should be appointed to go through the list with a view to taking steps for the recovery of such of the subscriptions as were likely to be got in, and the elimination from the list of "subscribers" of the names of those whose subscriptions might be thought to be irrecoverable. It was understood that the duty referred to would be relegated to the auditors.

The CHAIRMAN moved the following resolution on the subject of local taxation: "That in the opinion of this Chamber many of the charges now made under the Poor-rate Assessment ought to be transferred to funds raised by Imperial taxation; but that such transfer will not justify the continuance of the exemption from the Poor-rate Assessment of income arising from personal property"—which was unanimously carried.

Colonel BRIDGWATER moved the following resolution: "That in the opinion of this Chamber the agricultural interest is entitled to relief in the matter of the Malt-tax"—which was unanimously carried.

The CHAIRMAN moved: "That the principle of the new Poor-law, making in-door relief the rule and out-door relief the rare exception, ought to be adhered to; that legislation is required to give Boards of Guardians greater facilities for carrying out this principle; and that the whole system of poor relief needs revision." This was a subject to which he had given a great deal of attention; and he knew of none of greater social interest. He entirely agreed with the principle laid down in the new Poor-law Act with regard to the dispensation of relief—namely, that such relief should principally be given in the house and not out of it. Many a long year had passed away since then; yet what was the result? Why, the very reverse of that. Take the whole country through, and it would be found that this was so. Most of the relief was given out of the house and not in it. In some cases there were no poor-

houses at all in Unions, as, for instance, in this county, in the union of Builth; and it was a strange anomaly that whereas the law could compel Boards of Guardians where there was a poor-house, to enlarge it, or constantly to alter it, it had no power whatever to compel a Union, where there was no poor-house, to build one. Of course where there was no poor-house there could be no in-door relief; but how was it with regard to those unions where there was a poor-house. As he had said before, the fact was clear and patent that out-door relief was more and more given, and in-door relief less and less, thereby utterly contravening the principle of the Poor-law Act. It would be said, perhaps, "Well, the spirit of the law being in the direction of giving in-door rather than out-door relief, it must be the fault of the Guardians that the contrary practice is the more generally adopted. Why don't they carry out the law?" Well, one might call "spirits from the vasty deep;" but would they come when one did call for them? The Guardians, it was true, had the power to order this or that person, or this or that family, into the workhouse, but they had no power to compel obedience with that order. They could put the Board at utter defiance in that respect; and as—if they were in need—the Guardians were absolutely bound to relieve them, they had no alternative left to them but, where the parties declined to go into the house, to give them out-door relief. This was the state of the case at present; and he did think that some legislation was needed on the matter. He did think that, first of all, our poor-houses should be placed in thorough order and made comfortable (as, in point of fact, they were obliged to be by the law of the land at the present time), and when that was done he could see no hardship at all in relieving persons in the house rather than by out-door relief; he thought also that Boards of Guardians ought to have more extended powers given them for carrying out the law, so as to be able to enforce the acceptance of in-door relief where thought to be desirable, deeming it to be a great misfortune to have the law a dead letter as it now was in the respect he had mentioned. He knew that there was a good deal of prejudice against the work-house, and he was not there to say there was not cause for it some years ago; but he did not think there was any cause for it now, and he did think that good and benevolent people, who had really fostered that feeling amongst the poor, would be doing great good if they would encourage the poor who were in want to enter the house, and so, instead of hindering the law, to help it to be carried into effect.

There was one thing that he thought was needed with regard to Poor-law administration more than anything else, and that was more supervision. Boards of Guardians wanted to know more about every case that was brought before them; yet it was utterly and absolutely impossible for an over-worked relieving-officer, who had a large district, to find out all about every case in that district. In illustration of his argument of the need of a more strict supervision, the rev. president pointed to the system of poor relief adopted in Elberfeld, Germany. There, districts are allotted to certain of the Guardians, who are termed district visitors; to each such visitor is assigned the overlooking of four families of those who, if need should arise, would be entitled to receive relief, and it is the duty of the district visitors to inquire minutely and particularly into the circumstances of each of those families; to find work for such members of them as can work and are not employed, and in case of their becoming distressed, to find out those of their relatives who are in a position to help them. In this way, and through this excellent system of supervision, the number of persons in receipt of relief was wondrously reduced, the result being that, whereas ten years ago, when the population stood at 50,000, the city was so steeped in poverty that eight per cent. of the population were in receipt of relief from the local rates, Elberfeld was now one of the most flourishing cities in Germany, only two per cent. of the population being in receipt of relief, although the total population had greatly increased during the decade. This Elberfeld system had attracted considerable attention, and Mr. Doyle, one of the most experienced officials of the Local Government Board, and a gentleman well known to Mr. Downes, was sent over by the Government to inquire into and report upon the system. He had accordingly done so, and had published a pamphlet on the subject, which would well repay perusal. He did not at all say that this same system could be carried out in England; he did not say that what was suited for Germany was suited for England, or even that what was suited for a single town was suited for a whole country. At the same time, what he had stated as to the Elberfeld system served to show us how much we needed a more extended system of supervision—how Boards of Guardians needed to know more about every case that was brought before them; for he said again it was utterly impossible for relieving officers, with the hundreds of cases they had under their charge, to investigate every single case. The subject was a very grave one; it was one that would have to be solved ere long, because the outdoor relief system was increasing; and yet, as many of those present would know, there were numbers of poor persons who were worse off than paupers and still had to pay rates. Here, on the other hand, was the city of Elberfeld, which, once a miserable, wretched place to live in, was now a happy and prosperous city, though the rates had become a mere tithe of what they were. It was no kindness to give people money to be idle; it was far greater kindness to find them work, as work was found for them in Elberfeld; and he was sure of this, that those who were really deserving, and those who were really in want, would get more than they did under the present system if the Guardians knew more about them, and if they could investigate their cases more than they were able to do now. The idle and the dissolute would then be made to work, and that, he thought, would be a great boon to the whole community.

Mr. DOWNES, in seconding the resolution, said the guardians of the Brecon union had lately been compelled to lay out £1,800 on their poor-house, and he was sure he did not know, under present circumstances, whether it was likely to be a quarter filled. He would be only too pleased, for his own part, to see fewer paupers in receipt of out-relief; but the law, while it really preferred indoor relief, would not give the guardians power to insist on the acceptance of the relief in that form, and to order them into the house. When a person came before the board, and the guardians gave him the option of going into the house, he exercised the option the other way, so that the relieving officer had either to give him out-relief, or have, it might be, to be indicted for manslaughter, which he (the speaker) considered a very hard case. The truth was, boards of guardians were altogether too much under the finger of the Local Government Board. If one of the officers of a board trespassed, they could not dismiss him without first submitting the case to the before-mentioned Board and obtaining their sanction. As far as he was concerned, he

would be glad to see the poor rates done away with. In his opinion, the poor were the property of the nation; why, therefore, should not the nation support them? He would be pleased indeed to see the poor supported from the property and income tax. Let the fundholder be brought in to assist, who now did not contribute a single copper to their maintenance. The rates were increasing; and, unfortunately, their respected friend, the president, as the chairman, and himself as vice-chairman, of the board of guardians, could not keep them down; they did all they possibly could, but it was quite out of their power. If, however, an alteration could be brought about in the present Poor Law, he had no doubt the rates would be considerably lowered. He would be pleased to see a larger number of paupers put into the house, and a smaller number receiving relief, believing that that would be considerably to the benefit of the ratepayers, and he had no doubt a great advantage also to the poor recipients themselves.

The resolution was carried. Major CONWAY LLOYD moved, that the vagrancy laws needing amendment, it was desirable, in the opinion of this Chamber, that vagrants should be placed more under the supervision of the police than at present. Brecon suffered a great deal from the number of vagrants and tramps who passed through the county. They were, he might say, a nuisance, and although he believed the Vagrancy Act was sufficiently stringent, if carried out, to prevent their travelling through the country, yet it had not been carried out in Breconshire. Having, therefore, the power to prevent the tramping about of vagrants if only they would exercise it, it was a mere matter of form to pass the resolution, though there could be no objection to that being done, with a view to strengthening the hands of the Central Chamber. But he did know that in other counties where the Act was properly carried out, the police being constituted the relieving officers so far as vagrants were concerned, the number of tramps had materially decreased. Speaking generally, and for the whole country, the resolution was a most desirable one; but speaking for Breconshire alone, all that was wanted here was to put the existing law in force. He did not at all know why it was not put in force in Breconshire, and the president and himself had arranged to bring forward this aspect of the matter at the ensuing Quarter Sessions.

The CHAIRMAN said he thought the resolution a most desirable one to carry. Legislation certainly was needed, because, although the police no doubt had authority even now which might be exercised in a far greater degree than was the case, and which he thought ought to be exercised to its full extent, it was not to be forgotten that if tramps did come into the Breconshire unions lodgings must be found for them. If they were really in want, he was the last person in the world to say that they should not have lodging and food; but by far the greater number of the tramps were the greatest scoundrels in the kingdom. They were the people who committed the robberies, who did the evil about the country, and, worse than that, it was they who spread abroad smallpox and other contagious diseases. Three times had they brought smallpox into the Brecon union within the last twelve months. If, therefore, these people could be prevented going about the country doing the evil they did it would be a great thing. The resolution went to this—that tramps ought to be more under police supervision than at present; and he did think it would have a very salutary effect if that class of people were taken out of the hands of the guardians and placed entirely under the control of the police, who, from the connection they would be brought into with them, would often be able to place their hands on members of the tramping tribe who had committed some robbery or other offence. Another good effect of the transference of the control to the police would be this—that the man who was a bad character and a vagabond would naturally not care to apply to the police for his ticket of admission to the tramp ward, and so the trade of vagrancy would be considerably checked in that way. Under these circumstances, he felt it would be a most desirable thing that vagrants should be placed more under the police. He could have wished that the chief constable of Radnorshire was still in the room, but he had left. He was one of the founders of that institution, and, as he believed he had pretty nearly driven the tramps out of Radnorshire, the Chamber would probably have been glad to hear what he had to say.

Major FENY LLOYD, the chief constable of Radnorshire,

explained, in reference to the "rooting out" of the tramps from the county of Radnor, that when appointed to the post of chief constable he had found the county over-run with them. They were so numerous as to be a public nuisance, and complaints were made on all hands. He looked into the matter with a view to abating the nuisance, and found that there was an engine already at hand in the Vagrancy Act, which he immediately proceeded to put in force. He had notices printed warning vagrants that the constables of the county had strict orders to carry out the Act, and stating, for their information, what were the penalties against vagrancy. This he followed up by issuing strict orders to the men under his command to apprehend all tramps and take them before the magistrates. These orders were rigorously carried out, and, as he was backed up by the magistrates, the number of tramps in the county was speedily and considerably reduced. In Radnorshire, too, the police acted as relieving officers for tramps in three out of the four unions in the county, and he found from the returns that whereas in 1868 the number relieved was 1,600, in 1869 it was 1,400; in 1870 it was

reduced to 756, and in 1871 the number was as low as 450. The number was being still reduced in a proportionate degree, till at the close of the present year he believed it would be found not to exceed 220. This was the effect of merely being active in making use of the machinery already possessed by the police, though it was owing, probably, to this very activity that Breconshire was favoured with so large a proportion of the tramping fraternity at the present time, because no doubt they were very happy to come to a country where they were not so sharply looked after. He really did think that if the Vagrancy Act was vigorously carried out by the police, backed up by the justices, it would be found to be a complete remedy for vagrancy in a particular county. Of course, being driven from one place, the tramps would transfer their society to another, so that the Vagrancy Act was not, perhaps, a remedy for the system in a national point of view.

Mr. McTurk proposed "That fresh sanitary legislation is urgently needed, giving compulsory powers to local authorities for the prevention of disease," which was put and carried.

FRAMLINGHAM FARMERS' CLUB.

THE AGRICULTURAL LABOURER.

At the March meeting the lecturer for the evening was Mr. Charles Fisk, of the Corporation Farm, Whitton, and the subject was represented in the following questions: "By what means is it possible to advance the position of the Agricultural Labourer, so as to make him a more reliable and better workman? and, How far will such an improvement in the position of the Labourer advance the business of the Agriculturist?" Mr. Goodwyn Goodwyn was in the chair.

Mr. Fisk said: I will first make a few remarks on the present aspect of the labour question, as I must think, to a certain extent, our subject is influenced by the movement now going on amongst the working classes. I need hardly go back to that far-distant date "when Adam delved and Eve spun," to prove that to labour is the natural destiny of the human family, or that the great Lawgiver ordained that by the sweat of his brow man should eat his daily bread, but we are constantly having it demonstrated that men do not adhere to this law; for no sooner does the opportunity offer of an easier living to be procured than 'by his sweat of the brow, or, in other words, by the labour of his body, than such offer is very naturally accepted. I have heard some men declare they liked work for work's sake, but I believe such men are few and far between. As a rule, the labour of the hands ceases so soon as men can provide for their wants by other means. In speaking of the working classes, let it be fairly understood I claim to know their wants, feelings, habits, their failings, and their virtues; they have them all the same as other men, hence their desire to better their position in life. Surely this desire is right so long as no unfair or improper means are resorted to to arrive at the end desired. Let me not be supposed for one moment to encourage a system of strikes, feeling assured that they do an immense amount of injury, and being also firmly persuaded that masters and men can adjust their differences without resorting to such extreme measures. I have referred to this labour movement, or perhaps, more properly speaking, it should be called the nine hours' movement, in order to show you how it will affect you as employers of labour. Call it by what name you will, it really means less work for the same money. Far preferable in my opinion would have been full time for a higher wage; but sufficient for my purpose if I convince you that it will require more workmen to carry out the general trade and business of the country. If such trade should extend itself in the same proportion as it has done during the last few years, the probability will be that a large portion of the rising agricultural labour will be absorbed by such trade and business owing to the higher rate of pay and other inducements held out. Without further preface, let us go to the subject on the card. I ask two questions, for which we are here to-night, to seek some sort of answer. The first is, "By what means is it possible to advance the position of the agricultural labourer, so as to make him a more reliable and

better workman?" And the next, "And how far will such an improvement in the position of the labourer advance the business of the agriculturist?" I will begin by making a statement, in which we shall probably all agree, that no two questions can be of greater importance to agriculturists. I think I may make another assertion, in which you will agree with me, that my two questions must go together, and that unless the improvement of the condition of the labourer be followed by an improvement in the condition of the employer in some shape or form, we shall have only half solved the problem. Our interests hang together, and any advantage to the labourer which is not an advantage to the employer, taking our interests in their widest sense, is only a kind of bungling repair, such as a thinking and skilful workman will not like to accept, and which will not have a very lasting effect. I must also warn you, gentlemen, not to expect me to introduce any new and startling proposal. I am, to a certain extent, averse to sudden changes. I have no wish to excite desires that can never be realised, and to my mind the tendency of the age is too strongly given to change without regard to the benefits that may be likely to follow. The principles I would act upon in the treatment of the agricultural labourer are as old as the hills. Further, I do not advise you to expect that I should point out any means by which we can, in a direct and off-hand manner, expect to attain our long-wished-for and much-coveted improvement in the condition of the labourer we employ, yet I would not discourage you, or lead you to fear that our discussion will be altogether barren of results. If we enter upon it with the right spirit, as I doubt not we shall, some good must ensue, though we may not be able to recommend our legislators to pass any particular measure to further our views, or even to give those views the form of a precise resolution. I have faith in giving an hour or two of earnest thought to any social question, and if we do no more we shall stir up each other's ideas; and who knows what is not possible when we are once set thinking? As to the improvement in the condition of the agricultural labourer, I have no doubt that many will hold that it needs none. Such persons will point to the fact that the works in connexion with agriculture are of a pleasant and healthy description; and they may say that the agricultural labourer is, all things considered, as well paid as any other workman whose calling is not more difficult to follow or more expensive to learn. Perhaps, gentlemen, I shall give you some matter to discuss, something which will raise a contrary expression of opinion, if I say that this reasoning is totally beside the mark. It is not for us, as employers of agricultural labour, to argue that our men are as well off as men employed in towns. If we find that they are of a different opinion, and practically demonstrate the fact to us by taking themselves off to towns in search of employment. We must remember that the labourer is actuated by the same im-

pulses as other men, that his only capital is his labour, and in fairness to himself and family he is perfectly justified in taking it to the best market; and when we find a constant and long-continued drain of young men from agricultural districts to other employment, we must accept that fact as conclusive testimony against the terms we offer. It will not serve our purpose to stand and argue that the labourers ought not to go, if we find that they will go. We must look around for the means to make the position of the agricultural labourer as desirable as those other callings for which they desert us. But first of all let us see if the labour does leave agriculture. In order to put this question clearly before you, I think I shall not do better than to quote from a paper headed "Occupations of the People," which appears in the British Almanack for 1845, issued by the Society for the Diffusion of Useful Knowledge. Under the following head I find the percentages of persons employed in three great classes of occupation were as under, showing the gradual lessening of the agricultural percentage :

Years.	Agricultural.	Commercial.	Miscellaneous.
1811	35	44	21
1821	33	46	21
1831	28	42	30
1841	22	46	32

Quoting from the same source I find in 1851 the total number engaged in agriculture was rather over 2,000,000. In the same year our entire population was near upon 21,000,000. Again, in 1861, the number returned as engaged in agriculture stands at 1,900,000. A foot note states: "The great fact connected with the agricultural class is, that the labourers are not increasing relatively to the increase of the population. It has been held, indeed, that there is a positive decrease. Within the last few years some apprehension has been felt that this fact is one of the symptoms of national decay. It may be received as an evidence of the direct contrary. Scientific improvements are moving the mere physical labourer into skilled labour, and the condition of the farm labour will be proportionately improved. As the improvement goes on he will obtain higher wages, more food, and some better home than a ruinous hovel." Again, taking the population of Suffolk for 1851, I find, according to "Glyde's Suffolk" it stands at 337,215; 1861, 331,000; 1871, 345,000. The years 1861 and 1871 are taken from the census of the county; thus 1871 shows an increase, but such increase is principally in what may be termed the town population, Ipswich and Lowestoft giving the largest, while districts such as Thingoe, Mildehall, Hartismere, Hoxne, Bosmere, Samford, and Blything show a considerable decrease. In Hartismere alone the decrease is 923, a large number for one district. Having, by the figures quoted, shown that the agricultural population is gradually becoming less, I think we may take it for granted that the labourers do leave agriculture. Is there no inducement we can offer that will fix him to his birth-place; has the labourer the same chance of advancement as the working men in towns; is there a field for him to provide sufficient for his maintenance in old age, or do the ordinary comforts of life fall to his share in proportion to the labour he has to perform? I am afraid these questions cannot be answered quite to our satisfaction, nor do I know that we have a remedy ready to our hands, for while the working men in towns have the opportunity of entering into business on their own account, there is really but little chance of the agricultural labourer being able to do the same. It is comparatively easy for a mechanic to start in business in a small way; in fact, large numbers of the masters in towns were originally working men, who by industry and steady habits have placed themselves in a better position. As this chance so seldom falls to the lot of the agricultural labourer, let us endeavour to see what would be the next best step for him in the ladder of life—is it not possible in the first place to put him into a better dwelling, to give him a fair quantity of garden ground, and, if possible, in addition, an advance of pay? Of course we must admit that supply and demand will, to a certain extent, regulate the wages given. I am of opinion that allotments of land have been of considerable benefit to the labourer, but of course where his garden is held in connection with his house, it is much better for him, as both himself and family would have better opportunities of profitably employing their leisure time. While freely admitting that it is not possi-

ble under any circumstances to make all men good, I am a firm believer in good wages and good cottages as the most certain means of improving the condition of the labourer, as well as the cultivation of the ground. Were landlords and farmers as careful to provide proper house accommodation for their farm servants as they are for their horses, we should soon see a wonderful improvement both in moral and physical development. The landlords, under present relations, are responsible to a much greater extent than tenants for cottage accommodation, and I must think that if farmers were more alive to the importance of a well-conditioned peasantry, they would put more pressure upon the landlords in order to induce them to provide proper homes for the labourers on the land upon which they are employed. What would a farmer think if he had to send his horses, after the labour of the day was performed, some two or three miles to miserable lodgings, yet this is the system many of the labourers are compelled to endure. No wonder that such men require but little inducement to leave the land of their birth. No matter what calling a man may be placed in, no comfort in life is to be compared to the charms of a well-regulated home. Let me then impress upon you who, I doubt not, possess this blessing, the necessity of providing, or inducing your landlords to provide, a sufficient number of houses for your labourers, for sure am I that this would be a step in the right direction. Which of you, as he walks over his well-cultivated occupation, or with a friend saunters through his well-stocked yards, to finish with a pleasant chat in a cosy parlour, would desire to suddenly break the charm by removal to a distant county, to be compelled to form fresh connections, to seek new friends? Am I right when I say this same sort of feeling exists with equal strength in the mind of the labourer? He should have his little home comforts, humble though they be. He would have an equal satisfaction in looking over his well-kept garden, in discussing the merits of his pig, or his bees, feeling that he had something to strive for, some home pleasures to compensate him for his toil. We come now to the question of wages, and here I confess that the problem to be solved is of a difficult nature. As a rule labour, like other commodities, is worth what it will bring in the market. To my mind the best inducement to make a quick and skillful workman is by a system of piece-work, where such plan can be fairly carried out. Of course this would require that the master should be thoroughly up in his business, with such supervision that no work improperly performed would be allowed to pass. By this means a larger amount of the current coin would weekly fall to the share of the labourer, the employer would be in no worse position, but in course of time would find his workmen of a smarter and more useful description. In all payments for work performed, they should be strictly cash transactions. On no consideration would I consent to either malt or beer forming part of the bargain. Even in harvest, with me, malt forms no part of the arrangement. If a master in a busy time thinks fit to give his workmen either beer or any other refreshment, that is a matter for his consideration; but let it be distinctly understood to be at his option. Of course there are many little acts of kindness that a thoughtful master can render to his workmen and family, both in sickness and in health. That such acts are freely rendered, both by the employer and his family, I am perfectly satisfied, and they go far to form that good feeling which should always exist between the farmer and his men, and as a rule such acts will be thoroughly appreciated. I look upon this as one of the redeeming features in connection with the relation between employer and employed in agriculture, and one that is seldom brought into practice where large bodies of men are employed in manufactures. With them cash is the only moving power, and I must think that the suggestions I have so imperfectly shadowed forth, if freely carried out, will go far to make the labourer a more reliable and better workman, and also conduce to put him in a better position. Before I dismiss this portion of our subject, allow me to say that I by no means agree with the absurd, overdrawn statements that from time to time have appeared in some of the public papers in reference to the condition of the agricultural labourer. They are evidently written by persons who could not have studied the question, and who most likely never employed a labourer in their lives, or even performed a day's work. While endeavouring to better the position of the labourer by all fair and legitimate means, I must be distinctly understood to re-

quire a full day's work for a full day's pay. Anything approaching to maudlin pity I thoroughly detest. I look upon the labourer as worthy of his hire. If he will only be true to himself, a better future is before him to my mind. The prospects of agriculture are of a cheering description, and to that source and that only do I look to cause that semi-pauperised state of the labourer to pass away, and I fervently hope that the time is not far distant when anything like pauperism amongst our sturdy agricultural labourers shall be a thing of the past, as I have ever regarded pauperism as one of the giant evils of England. Perhaps I ought, before quitting the labourer and his dwelling, to say that I have not fished on his education, and for these reasons: that my remarks apply to those who are already beyond the age when education is imparted; and, further, that this steed has already been ridden so hard, that I have no desire to take a canter. As to the labourer's dwelling, I believe the cost of good useful cottages for labourers has been much over stated. From my practical experience I am able to state that from £75 to £100 will build and complete, fit for occupation, a good and substantial dwelling for a labourer, the cash for which may be borrowed by all landowners of the Lands Improvements Commissioners, at 4 per cent.; so that from £3 to £4 per year should be the rent of the farm labourer; not a large sum for the benefits conferred. Gentlemen, we now come to our other question, "How far will such an improvement in the position of the labourer advance the business of the agriculturist?" It is no part of our business to-night to go into the question of profits; that would be quite another matter, and I should not have used the term if I had not thought you would hardly have deemed agriculture to be advanced unless I show in some shape an advantage to the agriculturist. It also gives me the opportunity to say that in considering this question we must take the agriculturist proper, if I may use such term; that is, one who makes his living entirely from the cultivation of the soil, who has no other string to his bow, or other source from which his expenses can be drawn. Not that I think the agriculturist has much to fear from such men as competitors, for although a few do crop up around towns who, from success in business or some fortuitous circumstance, turn their attention to farming, very few of them become really successful agriculturists. I have had come under my notice some signal failures. I could point to one farm near Ipswich that has wrecked the hopes of more than one successful trader, who have had cause to say "though pleasant to the sight, yet bitter to the taste"; who, I have no doubt, ascribed their want of success to their want of knowledge of the business they had entered into; for it is no more strange than true that an immense number of persons are ready to tender their advice on farming practice, whether they had ever been engaged in such practice or not. When I first turned my attention to farming, some twenty-five years back, I was astonished to find that all the persons I came in contact with professed to understand farming; and holding land, as I did at that time, on the verge of the town, I had a large amount of advice gratis, which I need hardly say was as varied as it was liberal. I found my would-be advisers were much at fault in their knowledge of labour; and I have no doubt that to a similar cause may be ascribed much of the want of success of those who have gone from trading to farming. I must ask you to pardon me this digression, but I wished to show you how lightly the qualifications for an agriculturist were received by those who have not well thought out the subject. When we come to think that to be a successful agriculturist one must possess a thorough knowledge of farm labour in all its details; be able to carry out all the varied works of the farm with neatness and despatch, so that no loss of force of any kind ensues; must know how to breed all kinds of stock; be able to buy and sell to advantage; must not only know the form which beast, sheep, and pig should possess, but also be competent to judge whether they are likely to prove a profitable investment; if, in addition to this, he knows the habits of the vegetables and cereals he cultivates, what application to makes to his land in order to draw out its full producing powers, and is in possession of a certain amount of mechanical knowledge—then we shall see that it is no light matter for a man to be able to claim to be at least a practical, if not a successful, agriculturist. Let me say I have used the word practical in its broadest sense, for though we are often told the agriculturist requires scientific knowledge, I take upon myself to say that with good practical knowledge

he may succeed, while on the other hand, let him be as scientific as possible, if he lacks the practical knowledge, he must come to grief. How such an idea as that any man would do to make a farmer could have got abroad I am at a loss to understand, as I am fully persuaded that no business or calling requires more real ability than such as will go to form a truly practical and successful agriculturist. Again, in considering this question it would not be fair to take any but a consuming value of the green crop—we know that not only are most of the terms of letting of the farms in this county of such a nature that the green crop must be consumed upon the land, but there is also this view of the case to be taken, if all cultivators took up this line of business you could not find a market. Having for many years grown extensively root crops for sale, I am able to say that there is a great change in this part of the business. When I first went into the London trade, all kinds of forage crops sold freely and well; now so many lines of railway are opened to places that formerly had no chance of sending bulky goods like these, London is overdone, and as such I have now for some years sent my goods to the North of England and Glasgow. Still I am of opinion that root growing for manufacturing purposes will yet become a great feature in the business of agriculture. Not only do we find that in our own county beet-root are grown and manufactured into sugar, but in other parts of England manufactories are erected and in operation for the purpose of distilling. One very large factory at Southampton is working for the purpose of manufacturing saccharine, carried on by Messrs. Hill and Co., who have advertised for roots in *The Mark Lane Express*, offering 20s. per ton, put on to the rail at any station within 50 miles of the manufactory, which would have enabled them to draw from four different counties. I myself had an offer from them for a freight at 25s. per ton, but owing to freights being high at the time, and Southampton a long passage from Ipswich, I was not able to accept their offer. I have now an offer from the Lavenham Factory for the coming season, which most likely I shall accept. Now, if these businesses are paying to draw the roots for such long distances, and this I have no doubt, why should you not have before long a manufactory established here in Framlingham, and thus materially advance the business of the agriculturist in this district? From the agricultural returns just published, we see that the growth of mangold is enormously increased; thus showing it to be coming greatly into favour. Are there not lands in this county in poor grass that would pay to break up, and crop alternately with mangold and wheat? the mangold to be made into meat, which is now bringing such a price that it must pay to produce. Surely it would be wise to both breed and feed all the stock possible; this would enable us to grow a larger quantity of corn, the cash for both meat and corn would find its way into the pockets of our producers, and thus materially benefit the agriculturist. If this extension of both stock and root growing is to be largely carried out, of necessity the agriculturist would require a full supply of really skillful and reliable workmen, so as to be in a position to make larger returns from his occupation. When we come to consider that rent and other fixed charges will be the same, whether with large or small crops, surely it must be to the advantage of the agriculturist to hire his farm in such a state as to be continually producing something of a money value. Of course, as this can only be done with a larger capital than is usually employed in agriculture, would it not be better for us all if capital was more freely embarked in agriculture; in other words, if the same amount of profit was made on a smaller quantity of land? The agriculturist, in a money point of view, would be in as good a position, and some of the undue competition for land would be removed. I have often smiled when I have observed that desire to be thought a large farmer which evidently acts in too many cases without reference to the quality of the cultivation, and I have thought how much better it would be for many farmers if by some accident they were deprived of a part of their occupations. In no manufactory or business would it be possible to be successful if a large part of the working plant and machinery were allowed to remain idle. Without trenching in the least on politics, I think I shall not be out of order if I say we must have observed a want of unanimity amongst the farming classes of this country on those great questions affecting their interests, which have so often been discussed without effecting much real good. It matters not what shade of politics one may favour when it comes to questions strongly

affecting the interests of agriculturists, they have but as one man to will it, and success will crown such resolve. When Chambers of Agriculture were first started great expectations were raised, the realisation of which I am afraid will be at a far distant date. Are agriculturists in this matter sufficiently self-reliant? Do they not yet lean too much on that old feudalism? which should be a thing of the past, whose heralds were wont to proclaim that all connected with the land sailed in the same ship, and though aspiring to be captains, I am afraid have not always done their best for their ship. Let me then close this subject with a hope that agriculture has a bright and cheering future, and that agriculture and agriculturists will go on prosperously. Commerce and manufacture are grand departments of England's greatness; but to my mind the grandest of them all—her sheet-anchor and mainstay, is that in which not only ourselves, but one and all are so largely interested—truly practical and advanced agriculture. Let us not forget that the produce of the earth is for all, and that "the King himself is served by the field."

The CHAIRMAN said that the first question was most interesting. Any man who professed to be a Christian would endeavour to improve the condition of any class of men, even if his own interest were not engaged. Mr. Fisk had suggested many things which were worthy of consideration. Mr. Fisk had no doubt, suggested some of the most evident means by which the labourer might be raised. Many things had been working for years to improve the labourer's condition in the very things that Mr. Fisk complained of. He (Mr. Goodwyn) was sorry to say, however, that there was only too much truth in Mr. Fisk's observation as to the labourers' cottages. It was true that as much attention had been paid to the housing of the cattle as to the housing of the labourer. The worst cottages, however, were those which had not been built by the landowners, but by persons who lived by the rents and who could not improve them. Mr. Fisk, no doubt, put the cost of providing cottages at about the right figure. His (the Chairman's) experience was that a good double cottage could be built for £180. The question of the necessity of giving the labourer a good piece of land had been often ventilated of late. It was, of course, impossible in many cases to give the cottages a good garden, and when that was the case no doubt a good piece of allotment was useful and even necessary. As to the labourers leaving the land and seeking employment in towns, that was the force of circumstances, for it must not be forgotten that different spheres of employment were constantly cropping up in towns, while the sources of employment on the land did not increase. It was not the labourers merely who sought employment in the towns, but the classes above them were down as it were into the vortex. He thought that many who had emigrated to towns had learnt a bitter lesson, and generally he found that those who came back were the most contented and the best of workmen. He agreed with Mr. Fisk's observations about piece-work, instead of that most demoralising of all practices, allowing men to go on month after month on the old routine system of so much a day. But, as Mr. Fisk had very properly said, a man must know his own business, to put the work out properly. He also thought that payment in money must be most satisfactory; but if the labourer was to become more independent and to be better paid, was it not a matter for grave consideration, whether he should be allowed to put his hand into the pockets of the classes above him whenever he became ill or unable to earn full wages? He (the Chairman) would yield to no one on the desire to see the labourers' condition improved, but he believed that no class of the community had been more improved within the last few years. He agreed with Mr. Fisk as to the necessity for farmers guarding themselves against holding too much land for their capital. Extra acres brought extra expenses for rent, tithes, and rates, and unless well worked they were likely to be a source of loss.

Mr. CHARLES CAPON said he agreed with Mr. Fisk as to the breaking up of poor pastures, and growing wheat.

The Rev. CHARLES CORRANCE admitted that the young men were leaving agriculture for occupations in towns. There was a great difference of opinion in the country as to the method in which this difficulty was to be met. Canon Girdstone and those who thought with him wished to introduce the principle of Trades' Unions into agricultural districts. He could say no more of that principle than that it had given rise to the Sheffield outrages, for denouncing which Mr. Roc-

buck had lost his seat. He agreed with the chairman that the position of the labourer was improved and continued improving. In the provision for his education the improvement within the last 30 years had been very great, and now we had the Education Act which still further improved the condition of the agricultural labourer. He would refer to Morton's Farm Statistics to show that the labourer's position had improved in regard to wages, and the establishment of benefit and clothing clubs. He admitted that the cottages ought to be improved, and that much remained to be done to improve the condition of the labourer generally, but thought that too much should not be attempted at once. It would be a pity by trying to turn the corner too fast to upset the coach altogether. He agreed that the allotment of garden should be near the labourer's house. He also thought that single men should not receive less than married men for the same work. If such things as these were attended to, not all the blandishments of Pottle or Odger could tempt the labourer away from the fair field of Suffolk. He believed in treating the labourer with kindness, as Mr. Fisk recommended, and thought they would never want for an extra hour's work, if they treated their men kindly.

The CHAIRMAN said with reference to the constant employment of agricultural labourers, that it was not to be expected that the labourers who had not certain employment could starve in the interval of not being employed. He also urged the desirability of paying single men as highly as others, provided their labour was worth as much. In other employments men were paid for what they are worth, and this principle should be carried out as far as possible in agriculture. He deprecated the employment of men merely when their labour was urgently needed, and then turning them adrift when the work happened to be slack, and he urged that the piece-work system would go a long way towards obviating this difficulty.

Mr. G. E. JEAFFERSON said he did not see how piece-work, and the payment of regular wage could work at the same time. If the piece-work system was adopted the men must necessarily be slack at certain times of the year, and busy at others, like bricklayers and carpenters. The system of paying men when they could not work was not a sound one. He did not see how it was possible to adopt the commercial system of paying for the labour done, and at the same time paying the men when it was not done.

The Rev. W. W. WOOD expressed his opinion that whether farmers liked it or disliked it, the piecework system must be adopted before long. He was afraid they did not sufficiently realise the position they as employers of labour would shortly be placed in; they would find that the number of agricultural labourers would soon be diminished to an extent little thought of at the present time. With regard to the question of breaking up pastures, he must say that he disagreed with that course being adopted, believing that poor pastures could be made more profitable. In the neighbourhood of London, land of that kind had, by means of irrigation, been converted into valuable and productive lands. Too many old pastures had already been broken up. He entirely agreed with those who advocated the improvement of cottages, and the attaching a piece of land to them. He did not think, however, that the superior accommodation and the land would keep the labourers amongst them unless they gave them something else. Strikes had been spoken of as objectionable; but they would have to put up with strikes. There would certainly be union amongst labourers. They must be fools, too, if they did not unite. It was all very well to say no, but such was the fact. After trades had already got the best of the recent agitation, it is useless to say that the labourers would not unite ("You don't want to tell them so"). He quite agreed that it was not necessary to tell them so, and he asked why the farmers did not at once meet the fact that they would have to meet. What was the use of putting off the evil day? Labour was the only capital that these men had, and why should they not combine to protect that capital, even as those in a better position protected their property?

Mr. PAUL READ said that little had been said as to the means to be taken to make the agricultural labourer a farmer, and called attention to the fact that for some time after the accession of George the Third, nobody was allowed to build a cottage in a village unless he could allot four acres of land. The land had, however, been taken away by the landowners and the farmers together.

Mr. PATTISON called attention to the effect of Trades' Unions on the prices of manufactured goods, and argued that agricultural progress must also rise in price if higher wages were paid.

Mr. FISK in reply said, as to the cottages not belonging to the landowners, that was the landowners' fault; for had they provided cottages, there would not have been room for speculators. He had advocated the breaking up of poor grass-land

in such districts as could not be improved, as Mr. Wood had mentioned, by irrigation. Such land would pay more if made to grow corn and roots. This would require more labour, and a better description of labour. Mr. Fisk also referred to other points.

Votes of thanks were passed to Mr. Fisk and to the Chairman, and the proceedings ended.

STOWMARKET FARMERS' CLUB.

THE ALLOTMENT SYSTEM.

At the monthly meeting, Major Pettward, Vice-President, in the chair, the subject for discussion was—Is the present Allotment System generally beneficial to the Agricultural Labourer?

Mr. GRIMWADE said: In approaching the introduction of the subject for discussion this evening, I am not free from a certain amount of diffidence, lest the advocacy of the system should suffer in my hands. I have for the last forty years espoused the cause of letting allotments of land to the agricultural labourers, principally as one application of the golden rule—doing as I would be done by. Although this is not strictly a subject connected with farming, yet it cannot be denied that it has a profound indirect bearing upon it, as well as involving in its success a great social principle, and the promulgation of industrial and thrifty habits amongst an important section of the community. The first promoters of it claimed sympathy and support from all right-minded persons, upon the ground that as idleness is the parent of vice, so employment, of a pleasant and profitable kind, was calculated to produce the fruits of virtue. The remembrance of the adage brings to its aid the complement from the good old hymn—

For Satan finds some mischief still
For idle hands to do.

And therefore it might fairly be presumed that any plan, simple in its initiation, like the allotment system, would be hailed by all philanthropic and Christian men as a boon charged with hope for the future in the dissipation of the "idle corner" which has in past years been the bane of many a village, and in many it is to be feared exists to the present hour. And although it must be admitted equal success has not followed on all sides, yet upon inquiry sufficient encouragement may be discovered to recommend a trial of it. We have but to turn our attention to the advocacy of the system by that magnanimous minded nobleman the late Sir Edward Kerrison (father of the present baronet), who, I believe, was one of the first to give impulse to the movement, and he continued to watch over its working with almost filial care to the end of his days, and I am happy in being able to read you an extract from a letter I lately received from Mr. Peck, of Eye, one of the principal tenants upon the Oakley estate, bearing testimony to its successful working to the present time: "Eye, Feb. 10, 1872. Dear sir,—In reply to yours of the 7th inst., respecting the allotment system on Sir Edward Kerrison's estate, the price charged per quarter-acre I have understood is about 10s., which includes all outgoing. Mr. Moore tells me (with the exception of Eye) they are principally confined to the labouring class, and are very much appreciated by them. For my own part I am equally satisfied with the system. The nearer the allotments are to the residence of the labourer the better for them; if they have far to go to cultivate them, they become of less value.—SAMUEL PECK." This is what might be expected under the auspices of the present baronet, whose acts all tend to the amelioration and happiness of his neighbours. About the year 1850 (having previously surveyed and mapped the parish of Norton), I was requested by the rector, Dr. Dicken, to allot a field in extension of the system, and therefore I lately made bold to beg an answer to a few questions as to its success, to which he courteously replied as follows: "Norton Rectory, Bury St. Edmunds, February 5th, 1872. Dear sir,—I have pleasure in answering your questions as to the allotment system in this parish, which has been on foot for upwards of 35 years, with some progressive

enlargement as I have had opportunity, and with the most favourable results. There are 73 allotments in this parish, partly on glebe land, partly on land hired by me for the purpose, and partly on land belonging to Col. F. M. Wilson, under nearly similar arrangements. I will take your questions in order: 1. The allotments are considered by the labourers to be very useful and beneficial. On any vacancy there are generally several candidates. 2. The minimum (with two or three trifling exceptions) is 10 rods, the others ranging from 20 rods to a quarter of an acre. 3. The annual rent for 10 rods is 3s., for more in proportion, all free from other charges whatever. 4. I enclose a copy of my rules, those for Mr. Wilson's land being similar; his rents are paid yearly, and not in advance. I have an annual inspection of all the allotments, and prizes are distributed to the deserving. I may add that during the whole time I have had no defalcation of rent, nor any complaint from the tenants, or from other occupiers in the parish, and believe the plan gives general satisfaction.—A. DICKEN, D.D. Rector of Norton." I also applied to the Rev. W. H. Sewell, of Yaxley, for the favour of his opinion of the system, having noticed, as I passed on the high road through the parish some, what appeared to me, profitably managed allotments, and this was his kind answer: "Yaxley Vicarage, Eye. Dear sir,—It gives me great pleasure to answer your inquiries to the best of my power. The allotments on the Norwich Road are the common land which was enclosed, I believe, some seventy years ago. The pieces are in acres and half-acres, and are let to Yaxley labourers. The rent, I believe, is £2 an acre. The land is much desired by the men, and is no doubt of benefit to them, for it gives them an opportunity of spending their spare hours industriously, and with an advantage to themselves. I do not think it could fairly be said that the allotment system is unpopular with the employers of labour. On the contrary, the more enlightened employers seem disposed to welcome any means which is likely to promote the welfare of their poorer neighbours.—I am, dear sir, yours faithfully, W. H. SEWELL." I will now offer some remarks upon my own experience in addition to the above valuable testimony. In the year 1840 I was a member of the Debenham Farmers' Club, the principal object of which was to stimulate, by the application of its funds in prizes, a competition amongst the allotment tenants and the occupiers of cottage gardens, the result of which was very gratifying. The then vicar, the Rev. J. Bedinfeld, supplemented the objects of the Club with much zeal by giving additional prizes in the shape of working tools for the garden, such as wheelbarrow, new spades, hoes and rakes. An annual inspection took place by a committee of the Club of the allotments and gardens, which ended by an exhibition of the cottagers' productions in the month of November. In the year 1843 I hired my present occupation under the late Sir William Middleton, and upon conference with the then excellent rector, the late Rev. C. Shorting, I found an identity of feeling between us upon the subject of allotments. I was willing to start it, and he was anxious to have it started. I soon arranged, with the consent of my landlord, to give up nine acres off my farm in two several fields lying most suitably for the population for allotments. It was also agreed that the clergyman should rent the land and let it to the poor at the rate of 3d. per rod, inclusive of all outgoing. The fields wanted draining, which I superintended for the rector, the expense of which was apportioned over all the allotments. I then set out the fields into 52 allotments, varying from 20 to 30 rods. This being done 28 years since, you will readily believe in the

necessity for re-draining it, and the marvel is that during the last summer several of the tenants applied to me to use my influence to get it drained upon the Government plan of 4 ft. tile draining. I told them I thought I could accomplish it, but the chief difficulty was in the carting of the necessary pipes from Needham Market to the spot. By an appeal to the farmers this was done, and in the month of November last the pieces were effectually pipe-drained—no doubt the first in the county, if not the first in the country, upon the plan. The expense of this being considerable, to be recovered yearly by a drainage-rate is a striking commentary upon the deep drainage, knowing, as we most of us do, the strong prejudices that exist amongst them as a class against any departure from the 30-inch draining. This digression, I trust, is pardonable, when we remember that we so lately had an excellent paper upon the subject of draining from Mr. Woodward, the hon. sec. of this Club. I find a diversity of practice exists as to the nominal landlord of the allotments. Thus, that where the clergyman of the parish starts the system upon the glebe land, he generally takes the management of it with a superior set of rules to when it is otherwise managed. I happen to have some knowledge of the working of the system in the parishes of Wetheringsett and Mendlesham, both large parishes, with a considerable number of allotments, and in the former parish the letting and management is vested in the trustees of the parish property, simply because the allotments are rented of them. In the last named parish (Mendlesham) the property is of the same kind, but I believe the rents are received by and accounted for by the churchwardens; and I find a great uniformity of practice in all parishes in the amount charged for rent, viz., at the rate of 40s. per acre free of tithe and parish charges. Also, in another respect, I found upon inquiry that in every parish there was a prevailing eagerness amongst the labourers to possess themselves of an allotment. Upon a late audience with my own rector, the conversation turning upon this allotments, he showed me his memorandum book, where the names of seven applicants appeared for the first vacant allotment. My own opinion is in favour of the minister of the parish being recognized as landlord in preference to any one else, as it is calculated to exercise a salutary supervision over the daily habits of the tenants as well as bringing the minister oftener into contact with his poorer neighbours, which cannot fail to be productive of mutual benefit. There is one point which next to the amount of rent per rod for each allotment, demands some expression of opinion from the Club to-night, viz., the payment of rent in advance. This may appear requiring and suspicious on the part of the landlord, but it is merely ideal, as the practice would entail no hardship on the tenant, whilst if the land was let by the clergyman of the parish, it would be of the greatest value to him to be free from all risk in being brought into pecuniary disputes with his parishioners for arrears or non-payment of rent; and, besides, the precedent of partial or entire forgiveness would be fraught with ruinous consequences to the landlord. The tenant would, also, in prospect of an allotment, pay his first rent cheerfully in advance, which would obviate all future difficulties and objections, and commend itself to the good sense of the tenant in the consciousness that at the termination of his tenancy, whenever or however it might happen, he would have nothing to pay in the shape of rent. It appears to me desirable that those members of the Club who possess information as to the working of the system, should to-night express a unanimous opinion as to the maximum quantity of land to be offered to candidates for allotments, keeping in view the prime condition of confining the cultivation to spade husbandry. We find, glancing from one locality to another, that the variation ranges from 20 rods to two acres. I think it will be apparent to most practical men that any quantity above an acre is loaded with objections, if, as I conceive, it ought to be cultivated by the spade. Within these last few years a society has sprung up at Needham Market, I believe, under the presidency of the Rev. F. Steward, for the purpose of encouraging cottagers and allotment tenants, by a horticultural and floricultural exhibition, at Needham, in the month of September, every year, which is well patronised, and a keen competition is manifested for the prizes offered. One of my own labourers had the satisfaction (through the recommendation of our rector) of receiving a prize of 8s. for a neatly and well-kept cottage garden and allotment. There has been, and are still, dissentients (I will not say opposers) to the system. It is alleged that un-

scrupulous and defiant men are to be found in every village, who, to reach a distant allotment, are habitual trespassers in making paths across fields and breaches in hedges very objectionable to farmers. I am sorry to say I must subscribe to the truth of this. Another objection by others is that holders of allotments are tempted to spend their early morning hour in labour upon their allotment before presenting themselves at six o'clock to receive their employers' orders, from which cause they carry a partially spent frame through the course of the day. I imagine this to be rather difficult of proof. But to draw to a conclusion. I must remind this meeting that within the last 50 years the laws and habits of society have become so transformed that we must no longer expect to be indulged in our own particular, and it may be peculiar views, but each man of education and station must ask himself the question, "What says duty?" It has long been said that "private interest must give way to public good," and if this bears sway in commercial undertakings, how much stronger ought it to apply in carrying out the apostolic injunction, "Be pitiful, be courteous." That the time has arrived when some united further effort must be made by the middle class to ameliorate the condition of the indigent must, I think, be admitted. We want the wisdom of the serpent with the harmlessness of the dove, to propound some scheme which, while it fascinates shall be profitable, and *vice versa*, so as to make every householder in the land feel that he has a stake in the country and is cared for. We are told by some to expect great things from the spread of education, which is no doubt true when viewed from a certain stand point.

This education forms the common mind,
Just as the twig is bent the tree's inclined.

This is undoubtedly true, but whether it has the additional charm of making men and women more contented and thankful for the many blessings enjoyed in this hitherto highly favoured kingdom, remains to be seen. If by education we shall succeed in reclaiming the drunkard, arrest the midnight thief and murderer, and bring to nought the machinations of all the workers of iniquity, then shall we have cause to bless God that He hath put it into the hearts of those in authority in this land to put in force the present educational machinery.

Mr. SIMPSON said Mr. Grimwade's paper was so complete, as to leave them little room for further discussion. He (Mr. Simpson) had obtained information from the South of England and from Essex. In the South of England, they had allotments as far back as 1830, and his informant told him that one result of the allotment system there was that the labourers frequented beer houses much less, and the poor-rate had been lessened. At Springfield, Essex, the allotments were each one-eighth of an acre, were cultivated by spade husbandry, and part of the rent of the allotments was returned in prizes of garden tools. They calculated that the cultivation of these plots of land, allowing three days time, to produce crops of potatoes and other vegetables, rent, and seed, cost about £1 7s. 6d., and that the value of the produce was about £3 5s.

The CHAIRMAN said he supposed the size of the allotment would depend on the size of the applicant's family. If he had a large family to help him, he could cultivate a large allotment. The nature of the soil must also be taken into account.

Mr. SIMPSON said that at Haughley he was informed the allotments ran from half-an-acre to an acre.

Mr. WOODWARD said a great part of the Haughley land was very light, and might be tilled anyhow.

Mr. A. COOPER said the late Mr. Tyrell had been very kind to the poor of the parish of Haughley, in so far as allowing them plots of land, but they were lots of very poor land. It was not at all such land as Mr. Pettitward had at Finborough or at Buxliall; but it had grown potatoes very well. As to a labourer having an acre of heavy land, he did not believe in it, if the man was going to work for a farmer. The rent, he thought, was about 38s. an acre.

Mr. JACKSON said there were 120 allotments at Ilitcham, all in quarter-acre plots, or none exceeding that. The poor were generally pretty well satisfied with them, and he thought the land was a great benefit to them. The rent was about two guineas an acre. The land had been drained for the tenants when the plots were first laid out, at the instance of Professor Henslow. The rent included all charges. There were two sets of allotments, one at each end of the parish.

Some of them were at the distance of half-a-mile from some of the cottages, as Hitcham was a very large parish, with an area of about 4,000 acres. The rent was paid at July and Michaelmas. There were always applications on the books for the allotments, and the rents were very well paid, on the whole, but occasionally some were in arrears.

Mr. KIRBY MOORE said that after what Mr. Grimwade had said, there seemed to him to be very little to say on the subject, but he happened to have had the management of the allotments at Barking and Needham for 28 or 29 years. There they had 129 allotments, and he had not a penny in arrears for rent. On this point they had rather a peculiar rule—made by Mrs. Davies, one of the originators of the allotment system—that any land of which the rent was not paid was not re-let. The consequence was, so eager were the people to have the land, that when an applicant found that he could not have an allotment because the previous holder had not paid the rent, he was willing to clear off the arrears himself. From 20 to 30 rods, according to the circumstances, was about the size of an allotment. Some of his were half an acre, but very few, and some a quarter, and there were some as low as ten rods. He had from half-a-dozen to half-a-score applications for each allotment as it became vacant. He found the allotments were very highly prized by the tenants, and one of them told him that he would not take a five-pound-note for his plot of 20 rods. Mr. Moore said he held that the allotment was no good to a poor man unless he had it within a reasonable distance of his house, and it was of much more value if the soil was such as he could work upon at any time. He thought every poor man ought to have a large garden, call it allotment or what they might. He thought as much as two acres would be detrimental to a labourer. A large allotment could not be cultivated by a labourer himself, or certainly not by spade husbandry.

Mr. H. BOBY detailed the experience he and others had gained in laying out a piece of charity land at Wyverstone for allotments. It was charity land, and about seven acres had been laid out in plots of a quarter of an acre, and allotted to certain cottagers in the parish, the idea being that a piece should be appropriated to each house in the parish. The rent was 30s. an acre free of tithe and other outgoings.

Mr. KIRBY MOORE said that all comers were allowed a chance of obtaining an allotment at Needham, and even character was not made an object. It was felt that if a man's character was not good the allotment might give him a chance of reforming. This expectation had also been realised. He should very much like to see a similar thing at Stowmarket as that was a large place, and he supposed was not above being improved.

Mr. HENRY CROSSE said that within two years, by the direction of Mr. Bond, who had land at Haughley which that gentleman held under Mr. Marriott, he had laid out some land in allotments of 20 and 40 rods. The rents were very regularly paid. They must, however, remember that in the neighbourhood of Stowmarket land was worth more than at Wyverstone or Hitcham, and, therefore, they charged a higher rent. He had charged 9d. per rod, and that had been gladly paid. The land was light, and all under spade husbandry. For one plot vacant last year he had 23 applications. He deprecated large allotments, as they must see the labourer could not have the capital to work them. Any man who had more than 40 rods had, he thought, more than he could do to make it answer his purpose. Mr. Crosse also deprecated the system of taking the rent in advance, as by doing so, they were taking the capital which the tenant needed for working it, and driving him to borrow money for which he had in some way or other to pay interest.

Mr. K. MOORE said it was very true that land was of greater value at Stowmarket, but the produce was also of more value.

Mr. LAMBERT, of Mendlesham, said the allotments in that parish were let in plots of 15 to 20 rods at 3d. per rod. There were no restrictions as to cropping.

Mr. K. MOORE said his only restriction was that the tenants were not to plant trees; and they did not encourage them to grow corn.

Mr. JAMES HEWITT said that at Combs there were allotments, and he observed that sheds were erected upon them to keep fowls and pigs. One man had three sows, and he thought that was more than a man could keep.

The Rev. HENRY HILL spoke in favour of having garden belonging to the labourers' cottages. That must be a very different matter to having allotments a quarter or half a mile away. He thought no cottage should be without a garden, and that the assigning an allotment to a cottage would have the effect of raising the rent of such cottage. He did not think the poor liked to be tied, they would rather have an allotment wherever they could find one vacant. If they were to have allotments here and there to suit the convenience of the labourers, they must take bits of land here and there, and that would be difficult to do in many parishes, though it might be easier to have one field for that purpose in a parish.

Mr. K. MOORE said Mr. Hill's remark as to raising the rent of cottages by attaching allotments to them was very reasonable, but practically he did not think cottage rents had been affected in that way.

Mr. WOODWARD said the allotment tenants could not of course be restricted to the four-course system, and he should think the land let to them would be worth rather more than if let in a large quantity to a farmer. He could go a long way in support of what Mr. Hill had said as to the advisability of having the allotment near, or attached to the house. But all cottage property did not belong to the landed proprietors. The allotment system was an advantage to the poor man, but he could not agree that the land let free of all charges at 30s. an acre was let at its proper value. He thought it should not be let at less than 40s. an acre. He was dead against acre allotments, and they would frequently find that where they were large old men who were on the parish were employed to till them. It could not be the object of the allotment system that the land should be cultivated at the expense of the rate-payers.

The CHAIRMAN proposed that the Secretary should read the rules of different allotment societies, in order that the Club might see which set of rules was best to adopt.

Mr. HENRY CROSSE objected to the Club's binding itself to adopt any set of rules, and said he was prepared to move as an amendment that they should not.

It was agreed to read the rules, and

Mr. BETTS, the Secretary, then read the rules under which the allotments at Stonham Aspal are managed, and proceeded to read the Wetheringset and Brockford rules, when

Mr. CROSSE said he did not think the Club could bind themselves to any of those rules, and proposed a motion that they do not so bind themselves.

Mr. GRIMWADE said the Club might express themselves in favour of a rule.

Mr. CROSSE objected to even that.

The CHAIRMAN said that perhaps he was wrong in calling upon the Secretary to read the rules, but as there was a difference of opinion as to whether they should be read or not, the matter should be put to the meeting.

Mr. WOODWARD thought there was nothing in simply reading the rules.

The CHAIRMAN ruled that he must ask some gentleman to propose that the rules be read.

Mr. WOODWARD was of opinion that the reading of the rules was a part of the discussion, and proposed that they be read.

Mr. PAGE seconded the motion.

The Rev. H. HILL proposed an amendment, that they be taken as read, which Mr. Scott seconded.

The CHAIRMAN then put the question to the meeting, when 14 voted for the amendment, and 13 for the resolution, which was lost, and the rules were not read.

Mr. GRIMWADE then replied to the discussion. He said what he advanced he believed to be correct. There had been some excellent observations made as to the ground being near the cottages, which he also referred to in his paper. He thought there was a unity of sentiment that the generality of the allotments were too large in extent. It was a fact that in his own parish the allotments ranged from 30 to 40 rods. Mr. Crosse had made some strictures upon the plan of paying the rents in advance, but he (Mr. Grimwade) held it was a good plan in starting a system of allotments, and that the tenant could not possibly be injured. As to what Mr. Crosse had said about a tenant borrowing, he thought that would be a very rare occurrence, and quite the exception, not the rule. He believed that an eighth of an acre would be a likely thing to be of advantage to the generality of labourers, but there

were certain families to whom it might be advisable to allow 30 rods. He thought in parishes where there were parish lands that the system should have a fair trial. With those remarks he thanked the members for the attention they had given to his paper.

Mr. CROSSE said he merely remarked that the paying the rent in advance took away the capital the labourer had for working his land.

Votes of thanks to Mr. Grimwade and the Chairman were passed, and the meeting terminated.

IXWORTH FARMERS' CLUB.

BENEFIT SOCIETIES.

At the annual meeting, the Rev. J. Yelloby in the chair, and Mr. J. Fison, of Barningham, in the vice-chair, the subject for discussion was Benefit Societies and the Labouring Classes, introduced by Mr. W. H. Short, M.D., of Walsham-le-Willows.

Dr. SHORT, in his opening, referred to various societies, including the trades' unions, which, however, did not in the main affect our labouring population, but he saw that within the past few days in a large agricultural district there was a strike of a large number of farm labourers, and a combination has been formed after the pattern of trade union. There was, he said, another benefit society which was little known in country districts, though of undoubted advantage to the working man. In London, in many large towns, and a few rural districts, co-operative societies exist, and, as far as present experience goes, they prosper. Of these there are now in existence more than 1,000, their members number over 300,000, the amount of their share capital £2,100,000. The districts most favoured by these societies are the manufacturing districts—such as Leeds, Halifax, Rochdale, &c., whilst here and there we find one in a country place. But when we speak, continued Dr. Short, of benefit societies, we are generally understood to mean those mutual societies formed by the banding together of a number of men, into which a man pays a certain sum of money (or contribution as it is called) per week, month, or quarter, and in return for this, when in ill-health, he receives a stipulated amount per week. Having made allusion to public-house clubs, he continued: I may here explain what is not perhaps generally understood by those unversed in these matters, but which the late Mr. Tidd Pratt took great trouble to impress on the public, viz., that a society being registered and its rules certified, does not vouch for its stability, but is only evidence that the Act of Parliament has been complied with, and that the rules of the society have been examined by the Registrar of Friendly Societies, and found to be in keeping with the law. It is of course much better to be sure that the rules are proper ones, but it does not infallibly follow that the club will be a lasting one or able to pay all demands upon its funds. I will now call your attention to a form of club, but of which I do not, however, profess to know much, and that is a club the surplus funds of which are at the end of every financial year divided among its members. Such clubs were, if I remember aright, common in some parts of the country, and in Dorsetshire especially, twenty years ago. Seeing an account of one in a Hampshire paper a short time since, I wrote to the president of that club, and he not only sent me a copy of the rules, but wrote an explanatory letter. The club is established in a large town in the south of England (Southampton), and has 35 or 40 members, who are admissible if between 16 and 55 years; each member pays into the funds 1s. 8d. per month, and 4s. 4d. per annum for medical attendance. In return for this, in sickness a member receives 8s. per week for ten weeks, and 4s. per week for the remainder of the year; he must, however, have been a member one month before he can claim sick-pay, and must not be in arrear of contributions. This club is in connection with a large chapel, but its president tells me that similar clubs are very general in Southampton. Several of the churches have them, and there is one also in connection with Royal Mail Steam Packet Company. Many of these have been established some years, and they are, I believe (the president says) a decided success. In answer to questions he says that the rules are not certified, and the club is so constituted because it is considered by them to be the best plan; that some clubs so conducted have several hundred members, and give £10 on the death of a member's wife; that the members are chiefly artisans, though there are such clubs in

agricultural districts; and that in this said club last year the receipts were £38 12s. 10d., and the expenditure for sick pay, &c., £19 9s. 1d., each member receiving a dividend of 13s. 8d. On the death of a member's wife each member contributes 1s. to the widower, after the manner of burial clubs. Amongst the rules I find this statement in relation to their funds: "In the event of a deficiency in the funds, the members to be called together as soon as possible to decide upon what course to adopt." How far such a club would answer in this district I am not prepared to say, but I should be very glad to hear the subject discussed. In speaking next of what I may call permanent in contradistinction to yearly clubs, I shall limit myself to those which belong to, or are represented in, our own district, for these more particularly concern us, and those whom we have to do with amongst the labouring classes. Since it was announced that I was to open this discussion, several friends have very kindly sent me reports and balance-sheets of different societies existing amongst us, and what may be said of one may be said of all—that they are all in a flourishing condition. Those to which I more particularly refer are the Odd Fellows, Foresters, West Suffolk Friendly Society, and the Norton Church Club (I have named each club in rotation according to its size). These are in my estimation fair sample clubs of any agricultural district, and as they each have special features I will refer to them *seriatim*. First, then, the Independent Order of Odd Fellows, Manchester Unity Friendly Society, which has branches in every quarter of the globe, and has been now instituted 60 years, has more than half a million of members, and a capital of £3,050,000. The worth per member is something about £9. Since its foundation in Manchester in 1812 it has steadily added to its numerical and financial strength (in 1836 they numbered 40,000, and in 1840 over 90,000 members), and the society continues to increase. The members of this society are chiefly artisans. The contributions are higher than in some other clubs, but the amount received in return in sickness is proportionately larger. The admissible ages range from 15 to 44 years, and the payment from 1s. 8d. to 3s. 6d. Members are free to receive payments in illness at the end of six months, and the burial money is paid after 12 months. The sick gift is 12s. per week for the first six months, and 6s. per week afterwards. £12 on the death of a member, and £6 on the death of a member's wife, is paid by the club. Sixpence per month is also paid for the surgeon and managing expenses. It would be difficult to thoroughly estimate the good done by this society. It is, however, more suitable for the artisan than for the agricultural labourer. I should state that its affairs are entirely managed by officers elected from amongst themselves, and the recent meeting of the A.M.C. showed how well they do their work. I should mention that in the Bury St. Edmund's district there are 36 lodges in unity, and a little over 3,000 members, while the average per member of its accumulated capital is from £12 to £13. In the Ixworth Lodge the total value of Lodge funds in January, 1871, was £2,119 13s. 6½d., being an increase during the previous year of 483 13s. 9d. The subscribing members in Ixworth were 142, honorary ditto 3. The Odd Fellows' Society has recently arranged that there shall be a class or table admitting labourers to their number—respectable agricultural labourers recommended by their employers. The sister society, the A.O.F. friendly society, equally merits praise for the good work it has done, and is doing; and in this immediate neighbourhood it is, I believe, better known amongst our agricultural labourers than the Odd Fellows' Society. It was originated in 1745, it is said, but established as at present in 1834; it has some 4,000 courts or lodges, its numerical strength is

about 400,000, and its capital $1\frac{1}{2}$ millions. Like the Odd Fellows, the Foresters have branches of their order in every direction, and their numbers are still increasing. According to the book from which I have obtained statistics of this order I find that they have several different tables, with payments according to the benefits to be received. Hitherto some courts have averaged the contributions in the first class to 2s. 4d. per month, the payments in sickness 12s. for six months, 6s. for the next six months, and 4s. afterwards, with £12 at the member's death and £6 at death of the member's wife; and in the second class at 1s. 9d. per month, and payments of 8s. per week for the first six months, 4s. for next six months, and 3s. afterwards as long as the illness may last; £8 at member's death, and £4 on death of member's wife. The member in this society becomes free, that is to say, may receive payments out of the club at the expiration of twelve months. With Odd Fellows the members are free at the end of six months. In future all Foresters' courts will have to arrange their contributions according to age. This society, like the preceding one, is a secret society, and its courts and funds are managed in a manner very similar to the plan adopted amongst Odd Fellows. I have had some considerable experience with regard to benefit societies of all kinds; and whilst, unfortunately, there are a few bad ones, there are very many good ones, but I never met with a better or one more suited to the agricultural labouring classes than what I may call our Suffolk Club—I mean the West Suffolk Friendly Society. It was commenced in the year 1830, and has gone on prosperously to the present time, and I hope and believe will continue to do so, notwithstanding there being so many other clubs in existence, but, to quote the words of Dr. Mackay, "There is room enough for all;" 870 members belonged to it on January 4th, 1871, and it extends to over 63 parishes. Since its commencement it has received from members and from interest £32,006 9s. 1d. It has paid out £16,136 4s. It has invested in securities of different kinds £15,820 9s., and had a balance in the hands of the treasurers at the above date of £19 15s. 5d. This Club has three sickness tables—as they are called—a pension table, a life insurance table, a savings bank, and an endowment table. In the first the ages range from 15 to 50; the payments range from 1s. 1d. to 5s. 5½d. monthly, according to the age, and, benefits, 6s. per week full pay, 3s. half-pay; a weekly allowance in sickness or health, after the age of 65 years, of 3s. per week, and £3 at death. In table 2, payments from 1s. 5½d. to 7s. 3½d. insure respectively 8s., 4s. as half-pay, and 4s. after 65, with £4 at death. In the third table, payments from 1s. 10d. to 9s. 1d. insure benefits 10s., 5s. as half-pay, and 5s. annuity, and £5 at death. The other tables I do not think it worth while to go into, unless any gentleman wishes me to do so. Belonging to the several classes in the Club I find—Table 1, 22 names; table 2, 383 names; table 3, 433 names; total 838. In addition to these there are those who belong to the Pension table, 7; Life Assurances, 4; Savings, 6; Endowments, 15; total, 870. The members of this Club have not the same voice in the management of their Club that the Odd Fellows and Foresters have, for the society is managed for them by a committee of influential gentlemen, and the members could send delegates to attend the committee. Unlike those societies, it is not a secret society, and its meetings are not held at a public-house. The society works well, and for myself I heartily wish it every success. The Norton Church Club is held in the Norton School Room and was established in 1845. It has three trustees, viz., Mr. P. Huddleston, Dr. Dicken (clergyman of the parish), and Mr. W. Jannings, of Barton. Its members are resident in 25 parishes, and their number somewhat over 160, and its capital is, I believe, between £500 and £600. Unlike the West Suffolk Friendly Society, whilst it has gentlemen acting as trustees, its affairs are entirely under the control of the members, who elect the several officers necessary for the proper carrying on of the Club, the benefits of which are commensurate with the payments which the members make. Speaking of the advantages of these societies, Dr. Short said: I am sure that a Benefit Society such as I have named makes a man more independent, more self-respecting, a better man, and a better citizen. It teaches him respect for authority, for the powers, whether it be his master, or a magistrate, or anyone in a higher position than he, for as he is a member of a club he has to obey its rules, and the dictates of its officers. As I saw in a Friendly

Societies' magazine, John would not mind contradicting Sam in the workshop, but when Sam is in office as President, Chief Ranger, or Noble Grand, he has a wholesome respect for his position. If you ask me what constitutes a good Benefit or Friendly Society, I would say that for it to be a prosperous one, it must start with such a rate of contributions as shall be known to cover all possible contingencies. There must be a graduated scale of contributions. There should be from time to time a valuation of its funds and properties, and whatever the benefits to be derived from the amount paid in, the funds for each benefit and for the incidental expenses should be kept entirely separate. There should and must be a constant addition to the number of members, which should never be less than 50; with that number, and an average amount of good health, a club might go on *ad infinitum*. The members of course entering these clubs should be examined in good health. Should benefit societies be held at public-houses or not? I have given you samples of clubs held at such places and elsewhere, and I shall be very anxious to hear what opinions are expressed upon the subject since the subject is creating much interest at the present time. My opinion is that in large towns where there are a sufficient number to carry it out, there should be a Friendly Societies' Hall, to be rented by the different societies of the neighbourhood; and my belief is also that in all districts the disassociation of the two would be best. At any rate, if the club be held at the public-house, the landlord should be paid a certain sum for the rent of his room and for firing and lighting, but it should not be left for him to get these things paid for by the profit on what he sells, for in some instances this might be a temptation to push the sale of drink, or it might be a temptation to adulterate what is sold that the profit may be greater. I would be the last man in the world to wish to debar the labouring man from rational social enjoyment; indeed, would do anything in my power to help him to the attainment of such a desirable object. It is the irrational and the debasing that I would wish to separate him from. At any rate, if the rental proposition were to be adopted the member would feel more free to do as he liked, and the publican would be relieved from the odium which has been put upon him by the suggestion that men are often tempted to drink more than is good for them. I have taken opportunities of seeing many publicans, since I thought of writing this paper, who have clubs in their houses, and they agree with me in this proposition almost to a man. In conclusion, Dr. Short said: How shall you, gentlemen, help in the matter of Friendly Societies? By endeavouring to get those who work for you to join some good club, and by becoming yourselves honorary members of such estimable societies. Those of you, gentlemen, who are guardians of the poor, I would ask to lend your help in recommending your several Boards to help those in time of sickness who in time of health endeavour to help themselves. In Stow Union it is the custom to reckon club money at half its actual amount, and to apportion the relief allowance accordingly. I have left some points, such as the question of average wages, and the amount that a poor man can set by for club purposes, for some one else to take up. And anything relating to the medical duties, &c., I have also purposely avoided, but shall be happy to answer any questions that may be asked respecting those duties.

A discussion followed, and a vote of thanks having been passed to Dr. Short and to the Chairman, the meeting separated.

MR. WILLIAM BROWN CANNING, of Elston, has recently died. As an agriculturist, Mr. Canning was long celebrated for his West Country Down flock, certainly the handsomest sheep of the sort ever exhibited; but he sold off a few years since. Mr. Canning was a member of the Council, and a steward of the Smithfield Club, an inspector of shearing at the shows of the Royal Agricultural Society, and a judge at the Bath and West of England and other meetings. He was a genial, unaffected man, and in the discharge of his public duties was ever obliging and accessible, assuming none of those little airs of secrecy and importance which some officials are so prone to adopt. Mr. Canning's loss, in no merely conventional phrase, will be much felt and regretted.

THE LAND LAWS AND THE CULTIVATION OF THE SOIL.

At a general meeting of the Cheshire Chamber of Agriculture, Sir Harry Mainwaring in the chair, Mr. G. W. LATHAM read the following paper on the subject of The Land Laws considered as Hindrances to the Thorough Cultivation of the Soil :

The subject of the land laws was essentially one which concerned them as members of the Chamber ; it was even more emphatically one which interested them as citizens, as agriculturists ; and living, as some of them did, by the receipt of rents and by the profit made after the payment of rents, they were naturally concerned in seeing that the laws which regulated the commodity in which they dealt were fair and just. They might be sure that as on the one hand no landlord had ever permanently profited by an undue increase of rent, so had no tenant ever been better from an unfairly cheap farm. They knew that on the full production of the soil depended the comfort and happiness of the people of the country. If, as was believed by the best authorities on agriculture, the produce of the soil might, by a judicious expenditure of capital, and by improved methods of farming, be raised to double or one-third more than it was at present, they should by that means be pretty independent of foreign corn or of foreign cattle. The increasing masses of the people would be better fed, and in case of war there would be no fear of famine. He did not mean to say that by any legislation they could turn bad farms into good, or that they could protect them against bad seasons and a variable climate, but he did mean to say that one thing wanted in agriculture was more capital, and that at present landowners, instead of increasing the industry which produced such an amount of profit annually, had placed it under every possible disadvantage. By the existing laws, the investment was made insecure as to its tenure, and the tenant liable to expulsion at the shortest notice. It was made subject to the priority of the landlord, who had the power to choose and determine on the solvency of the man he had chosen as tenant. Only let them give security to the farmer, cease to make laws favourable to the few at the expense of the many, and they would find that capital would flow in without let or hindrance, and limited only by the natural laws of supply and demand. At present the difference between agriculture and commerce was that by the first men sought to live, and by the second they hoped to grow rich. And when interpreted, what did this mean, except that it was a concern in which no one cared to invest largely and without fear, but that farmers were content to earn a bare livelihood without the smallest hope of a provision for old age, and no expectation of increasing their original investment ? He wished to bring no arguments against the landlords as a body ; the evils he deplored had grown up gradually, and were the wretched growth of a feudal system now long extinct, and of decisions of the law courts based on a state of society and on a system of farming both long passed away. He felt sure that if the landowners had, as a rule, exercised to the full the powers they had under these laws, we should, in this country, have been in the same state of agrarian riot as the sister country was a few years ago. From that sad consummation, this forbearance in general of the landlords, the patience of the tenants, and the good sense of both had happily saved us.

Still, if they were wise they would not wait to ask for—and their rulers would not wait to grant—the amendment of bad laws until the change was demanded by threats and violence, or until evils which were now only possible came prominently into existence. Speaking of the laws of primogeniture and entail, he said that the effects of the abolition of the first, which was, he believed, certain to be proposed, would be so gradual as hardly to be felt in this generation. As regarded the law of entail, it had much the same effect as the custom of primogeniture. A tenant for life would do very little for the benefit of the land. He could only borrow money under the authority of certain acts of Parliament, or by life insurance ; he could not lay out his money in permanent improvements, such as cottage building, the erection of farmhouses, draining and planting, without giving the whole benefit of his money to the one member of his family who was best provided for, and perhaps to some connexion for whom he had no love. What was wanted was real freedom—freedom of sale, freedom of transfer, freedom of taxation—and to gain this they asked for the prohibition of all those bonds which the system of settlements and entails had woven round them. If all tenures but fees-simple were abolished, he believed that they would have done much to the good of the nation at large, to the owners and their families, to the occupiers, and to the labourers. With regard to the security of the tenant-farmer, so long as the improvements he made were unexhausted, he objected to a lease, because, in the first place, it did not provide for the land being kept in its highest state of fertility ; and secondly, that by it the tenant was bound to the landlord and the landlord to the tenant for a term, when perhaps it would be more convenient and agreeable for them to part. A man might want to put his capital into some other business, he might hear of a better farm, or the landowner might fairly wish to alter the distribution of his farm ; and yet an existing lease bound them together as long as it existed ; and if to avoid the inconvenience of this a man took a farm from year to year, there was no doubt that he was at the mercy of his landlord. He knew that on many estates, notably some in Cheshire, a lease from year to year was equivalent to a lease for life so long as the tenant conducted himself properly and farmed well, but the misfortune was that the landlord was the sole judge of the tenant's conduct. A dispute with an agent, a few words with a game-keeper, a slight variance with the parson, a sentence spoken at a public dinner, a vote given in opposition to the landlord, might turn the white sheep into a black one. He believed, however, that one of the greatest hindrances to all permanent improvements had been the legal maxim that so soon as a person fixed up a building permanently it belonged to the landlord. When, by the passing of the Bill for secret voting, the desire of territorial aggrandisement for political purposes had passed away ; when, by the repeal of the Game-laws, the habit of turning good land into a happy hunting ground had ceased ; when land was possessed as an investment to produce profit, and not as a luxury for a great man to enjoy, would not the landowners be more inclined to let their land at a rent varying with the price of the produce and liable to be revised at certain intervals ? In regard to the Game-laws he was willing to accept, as a remedy for the present evil, that they should be made, as it were, permissive ; that in districts where the population was above so many in a certain acreage they should absolutely and entirely cease ; and that in districts where the population was scantier the ratepayers should have the power of deciding whether wild animals should be kept up by artificial laws. If they so agreed, then they should pay the cost of prosecutions and of maintenance in gaols. He hoped that he should not shock them very much when he said, too, that it seemed to him that the law, by which hounds having found a wild animal on a property had a right to follow it on to another man's land, was entirely incompatible with the thorough cultivation of the soil. Last year he knew of one meet in Cheshire where about four hundred horsemen

were counted, and generally they saw fields of some 80 and 120. Could they hope to see their clover, their wheat and beans flourish when such a cavalcade had ridden over them? Would early potato drills look as smooth as before, after an army like this had passed through the field? Were their hedges much improved by the charge of such a light brigade? He read the other day in the columns of a sporting paper actually a serious proposal that no gentleman should any longer subscribe to any agricultural society except a man who used wire in his fences was excluded from the chance of gaining a prize. He for one held that the primary use of land was to feed the people, and not to amuse the rich; and that if damage be done to the land by the concourse of horses and hunters, there should be some short and simple way of recovering damages from those who by their ownership of the dogs had collected the mob. They would demur if two clubs from Manchester or Liverpool were to claim the right of playing cricket in their fields. In former days tenant-farmers might have objected to a little affair between two of the fancy coming off in their meadows; but they were expected to submit quietly to the inroads of a large party of gentlemen from the neighbouring towns—not one in ten of whom they had ever heard of before; nor one in twenty, even if that were any excuse, had land or tenants of his own to be injured. He feared that at no distant time they should have to require that those who wished to destroy wild animals should do it in a country where the wild animals had not first to be preserved at some cost, and then killed at the cost of the loss of valuable food for the nation. There were some smaller grievances upon which he should like to say a few words. These were, the present principle of rating, and the notice to quit at the end of six months, which was utterly insufficient. He believed that what he had asked for—the abolition of the laws of primogeniture and entail, the destruction of the law of distress, the enactment of a law of Tenants-Right, the modification of the Game-laws and trespass, and a change in the plan of rating—were what they had a right to demand. They should ask for nothing less, and be content with no compromise. They had been treated as milch cows by the landlords, as patient oxen by the Legislature; they had borne unfair burdens, and they had laboured for other men's profit; but they represented after all the great industry of the nation, one of which the income, when capitalised, would amount to £600,000,000 sterling, and if they spoke out boldly and acted fairly there was no doubt that measures on those subjects would be considered and passed on an early day. Even were there any power in the country which would perpetuate injustice, he believed that there were very few who would desire to do so. The great changes in the country's history had all been carried by combination and fair argument, and besides the claims to be had that their importance as an industry gave them, besides the strength they gained by a righteous cause, they had on their side the support of the people, whose interest it was that the food should be cheap and plentiful. They asked for what had been given to trades—for freedom; they asked it for their sake as tenant farmers, and even more for the sake of those who dwell among them—the labourers. He did not doubt but that they would gain it, and though he looked forward to no sudden or violent change, though he believed that even the alteration of these laws would produce a gradual rather than a sudden effect, yet he trusted the day was not far distant when it might be said of this as it was said of another country in days gone by, "The pastures are clothed with flocks, the valleys also are covered with corn. They laugh; they sing."

Mr. SLATER said the paper was of the greatest possible importance, and if the debate had to be postponed, he would further suggest that it should be printed and freely circulated. He bore testimony to the restrictive and foolish character of many of the leases, and believed that the best method to effect a remedy would be the adoption of one general system. Speaking of the damage inflicted upon tenant farmers he said he sustained injury to the amount of £10 annually by the breakage of fences. He thought that if the gentlemen of the Cheshire hunt would not advertise their meetings so freely, the number at each gathering would not be so large, and the damage consequently less.

Mr. BATEMAN seconded the proposition to print and circulate the paper. As a tenant farmer he thought they were deeply indebted to Mr. Latham, because, from the position

they occupied, they would have been afraid to speak so confidently upon many subjects dealt with in the paper. Since he could remember, there was a time when Cheshire landowners would allow their tenants to plough only one field.

Mr. ASTON (Tarpорley) expressed the gratitude many tenant farmers felt to Mr. Latham for the freedom and courage with which he had treated the subject.

Mr. DUTTON objected to many of the proposals contained in the paper. Unless they could ascertain some method by which capital invested in land could be more remunerative than when applied to commerce, they might talk till doomsday and they would get nothing. The uncertainty of weather and the liability of stock to disease, and the attendant losses were among some of the principal reasons why people hesitated to invest money in land in preference to commercial pursuits. He would strongly object to the introduction into England of anything like the Irish land system. On the question of hunting he fully concurred with Mr. Latham, and hoped that some remedy would be adopted to put an end to the monstrous injustice inflicted upon Cheshire farmers.

Mr. GEORGE WILLIS said that as a tenant farmer, after several years of careful study and observation, and some experience in the practical working of the land laws of England, he felt free to say that they were most pernicious and unjust.

Mr. LATHAM, in stating his refusal to have the paper printed and circulated as a pamphlet, proceeded to add to his previous remarks the grounds upon which he based his argument that the land did not belong to landlords, but to the people.

Mr. DUTTON asked if Mr. Latham meant to say that there was any distinction between land and property?

Mr. LATHAM asked Mr. Dutton to what property he referred.

Mr. DUTTON replied that he meant house property, or property invested in ships, for instance.

Mr. LATHAM said that in his deliberate opinion land was not any man's property. It was the property of the nation, and held in trust for the people.

The CHAIRMAN wished some one else had occupied the chair. He could assure the Chamber that he did not feel easy. He did not think the Chamber was instituted for any political purpose, but rather for the discussion of agricultural subjects. He had not attended many meetings of the Chamber, but he certainly never had been present at a meeting in which they had had a discussion of that description bordering upon political subjects.

Mr. LATHAM asked to what political subject the chairman referred?

The CHAIRMAN said that in the course of the proceedings it had been stated that it would be better for landowners to quietly submit to measures which would ultimately be passed, if not peaceably, by force.

Mr. DUTTON thought that the introduction of principles such as underlay the paper was undesirable.

The CHAIRMAN said he concurred with the paper in some respects, such as arbitration between the outgoing and the incoming tenant and the landlord. He did not believe there was any landlord in Cheshire who would refuse to pay for unexhausted improvements. ("Oh, oh," and "Yes, yes").

Mr. WILLIS said he was quite prepared to enumerate such cases.

The CHAIRMAN said he could state instances where tenants had exhausted the land, and not treated the landowners fairly.

The Secretary, Mr. RIGBY, asked whether, seeing both sides had been heard on the question, it would not be better to conclude the debate, and pass a vote of thanks to Mr. Latham? This was submitted to the meeting and carried.

Mr. LATHAM wished to know if there was to be no more discussion at a future meeting? If it were so, he hoped that the reason assigned would not be on the ground that it was dangerous to discuss it. It must be apparent to everyone that in discussing agriculture and the land laws they could not fail to indirectly introduce politics. They were not going to take up such a subject like a simple debating society. They were bound as practical men to ventilate this subject, and if there were hindrances and obstructious, measures ought to be suggested for their removal.

The meeting concluded with a vote of thanks to the chairman.

THE MAIDSTONE FARMERS' CLUB.

UNDER DRAINAGE.

At the last meeting, Mr. Thos. Bridgland in the chair,

Mr. BAILEY DENTON read the following paper:—Having written and said so much on the subject of under-drainage within the last twenty years, and having been connected with drainage-works in various parts of the country, which, in the aggregate, have cost more than a million of money, I should have been indisposed to enter again the arena of discussion, were it not that I have thought that the results of my experience might be of some general utility. I am led to think this because the progress of under-drainage has undergone a check within the last few years, from causes upon which some useful remarks may be made, particularly as we are on the eve of a wide application of the liquid refuse of towns to land by irrigation, or intermittent filtration, the permanent success of which latter application principally depends upon the way in which the necessary under-drainage is performed. The check which has been experienced has not arisen wholly from causes connected with the operation of drainage, but from the coincidence that there has been for the last five or six years a succession of comparatively dry seasons, including the two years of absolute drought of 1868 and 1870, and that every operation involving manual labour has greatly increased in cost within the same period of time. The occupiers of land consequently have been content to leave their heavy lands *undrained*, on the principle of "letting well alone," instead of acting upon that better axiom of economy—applicable literally, and with special force, to under-drainage—of "providing against a rainy day." I need not point out at any length the pernicious effect upon agriculture of the "let-well-alone" policy, but will merely remind you of two facts, which must go far to confute it in reasonable minds. The first is that in dry seasons, when there is no surplus water to remove from the soil, land that has become pulverised by under-drainage, in consequence of the admission of air throughout its mass, derives great benefit from the moisture with which the air is charged, even when that air is believed by the uninitiated to be extremely dry. This advantage was made manifest in the two years of drought to which I have referred. It was then observed that in deeply-drained and well-cultivated clay lands the crops were carried forward from seed-time to harvest without any obstruction in growth or fructification, and with the most abundant results. Some of the best wheat and bean crops I saw in the year 1870 were growing on drained clay land, that had been steam-cultivated, and such land that had been previously let at 18s. an acre, tithe free. That drained land should generally be more productive than undrained land in dry years, will, probably, be doubted by those who may have noticed the quantity of grass growing in low undrained meadows, when higher pastures are scorched and withered. On a close examination it will be seen, however, that in nine cases out of ten the sustenance derived by animals from the short, baked grass of drained land is in excess of that derived from the sedgy stuff grown on undrained lands, particularly if there is a supply of good drinking water near at hand. My own observations lead me to the conviction that the advantage of admitting the air with the moisture it contains into the soil during dry years is practically very great. On the question of utilizing the water of under-drainage in dry seasons I must not now speak, though with Romney Marsh so near at hand, where I have heard of sheep dying from thirst in considerable numbers, at the very time when I have been draining the high grounds above and throwing away water in large quantities, I could find in this single object matter enough for an evening's discussion. I therefore pass on to the second fact which I think should dispose of the "let-well-alone" policy, and that is, that the cost of under-drainage is gradually increasing, and is likely to increase even at a greater ratio than hitherto. When I started draining, five-and-twenty years ago, the ordinary cost of four feet digging in clay soils was a penny a yard, or 5½d. a

rod: it now costs 1½d., or between 7d. and 8d. a rod, and the probability is that those who have comforted themselves with letting well alone will have to pay much more when they set to work, for we cannot shut our eyes to the fact that while labourers engaged in agriculture are on the decrease, owing to the more active demands of trade and commerce, efforts at combination are being successfully made to raise wages in rural districts, and this will necessarily extend itself to under-drainage. This is an ugly fact, but it must be looked in the face. The increase, too, is not confined to the mere labour of cutting the drains but to the making of pipes also. I have given as little as 15s. and 16s. per thousand for two-inch pipes made as well as any pipes I have ever seen; now, the price at the same yards is 20s. or 22s. From these several causes the average cost of clay land drainage four feet deep has, within my own experience, increased from £5 to £6 an acre, and it will not be long before my "let-well-alone" friends pay £7 an acre. Having expressed publicly an opinion that the condition of our rural labourers is on the whole better than that of those employed in the mill and factory, you will believe me when I express regret that the influence of trade unions should be at work in the village and on the farm, though I must confess that with the cost of food and clothing increasing every day, we must be prepared to advance the price of labour in order that the labourer's family may be properly fed and clad. Had this country been earlier alive to the advantages of education—and particularly to that character of tuition known as "technical," which would have made the labourer's work more valuable—the agricultural employer would not necessarily suffer as he now will by the payment of higher wages, for he would obtain in the improved character and quantity of work done by the labourer so educated an equivalent for his increased wages. At the present moment it is only in exceptional cases that the agricultural labourer has been benefited by technical teaching. As I mentioned on former occasions, when I have spoken on the subject, I have known Dorsetshire men who had earned with difficulty from 7s. to 9s. a week, become expert drainers under technical teaching, and afterwards earn from 18s. to 20s., and at the same time give a better return for the wages they received than when receiving only from 7s. to 9s. Speaking generally, there is no doubt that the work of under-drainage is better done now than twenty years back, but it is surprising how little improvement has been made in the actual work of digging, though expertness in that, more than in any other description of field labour, might be made a means of obtaining increased wages. Much of the improvement that has taken place is due, not to the improved way in which the trenches have been dug, but to the supervision exercised over the finishing, *i. e.*, the bottoming, of the trench and the laying of the pipes, without which the work would be of little or no avail. In fact, a Huntingdonshire drainer would, twenty years ago, cut a depth of four feet in the Oxford clay of the oolite, with an opening of from 8½ to 10 inches, taking pride in showing how little earth he would thus remove. Now, most men will open the trench at widths varying from 14 to 18 inches for the same depth. I need not tell you that if one man can dig a drain four feet deep, and move only one-and-a-half cubic yards of earth in each rod, while another man will move two-and-a-half cubic yards; the former can earn better wages by devoting his strength to a greater length of cutting, while the employer, paying no more per rod, would be advantaged by the greater rapidity with which the operation would be performed. There is often the difference of a yard, worth perhaps 2d. per rod, in the earth moved by one man compared with another. I hope that those who hear me, and those who may read the observations, will accept this fact as an illustration of the advantage of technical education in all farm work, and seeing that what we have done within the last twenty-five years in under-drainage is but a mere flea-bite compared with what remains to be done, will help to obtain for the farm-labourer those advantages of practical tuition

which he pre-eminently requires. Having appeared as the advocate of the technical education of the farm-labourer on several occasions, I am afraid you will say with Polonius "aside" that I am "still harping on my daughter." This, however, I shall consider no stigma, for I verily believe that the only way in which farm labourers can obtain increased wages without detriment to the agricultural interest, will be by doing better work, and more work within the time devoted to labour. I should not be true to my natural sympathies if I lost an opportunity of impressing upon my agricultural friends the truth that with the increased wages of the labourer will come increased rates and imposts, and that it will be fallaciously supposed that the rent of farmers will be proportionately reduced, so as to throw the loss from the tenant on to the landlord, for it is certain that for every farm vacated within reach of a railway station, there will be at least 20 applicants. And it is natural that this should be so, even in the face of increasing outgoings, for our island does not increase in size, while the population consuming the produce doubles in 50 years, and capital increases in even greater proportion among those who are ready to embark in farming. I will here refer to a point in connection with the cost of labour which has had its share in deferring the execution of drainage works—I mean the indisposition of tenant-farmers to give up to their landlords the carrying out of drainage works—many tenants preferring to pay for the labour and do the work themselves if the landlord will find the materials. At first blush this appears to be a very equitable arrangement; on examination, however, it has nothing to recommend it, either to the landlord, who would pay two-fifths of the cost, or to the tenant, who would pay the remaining three-fifths. To the landlord it is objectionable because he would be paying his share without any return whatever during the occupation of the tenant paying for the labour, though he would not fail to recoup himself upon the retaking of the farm, or a fresh tenancy occurring. To the tenant farmer, who may flatter himself that he is making a good bargain, the arrangement has even less to recommend it. This will be seen by dissecting the figures, as every man of business should do. The average length of holdings in this country has, I believe, been shown to be fourteen years, taking into consideration change of occupation resulting from death and other causes. The average cost of four feet clay-land drainage may be taken to be at this moment £6 an acre, of which £3 12s. would represent the cost of the labour (which the tenant would pay), and £2 8s., the value of the materials (supplied by the landlord). If we suppose 100 acres to be drained on this arrangement, the amount of money contributed by the tenant would be £360, and that by the landlord £240. It is unnecessary to point out that the tenant might employ his £360 on the farm in the purchase of stock or manure, and, if properly used, might gain from it a return of 10 per cent., which is £36 a year. If he had capital enough without it he could lend the money on good security through his lawyer, and get five per cent. for it, or £18 a year. In each case he would retain the principal money for the benefit of his family when he should die. Now, let us suppose that he buries the £360 in the drainage of his farm. To recover the outlay in the average length of tenancies (14 years) which he must do if he acts justly to himself and children, with 10 per cent. interest which I have shown he could gain by another use of the money, he must make as profit rather over 16 per cent., or between £57 and £53 a-year, which is 11s. 6d. an acre. Every accountant knows this. The principal money would then come in by dribbles, and, if not re-invested each year of the 15 years, which would be rather a difficult thing to do, would very probably have vanished by the end of the 14th year. Compare this state of things with the landlord executing the whole of the drainage under, for instance, the General Land Drainage and Improvement Company's Act, by which the cost of the work, with interest, may be charged on the drained lands, and repaid by instalments at six per cent. You will find that a tenant being required to discharge the whole charge would have to pay within a fraction of £36 a-year for the 100 acres, or 7s. 2½d. an acre, which is six per cent. on £600, the cost of 100 acres of drainage at £6 an acre. In this way the landlord would save his contribution; while the tenant would pay only two-thirds of what he would contribute under the other arrangement, while he would, moreover, have his principal money to lay out in any way he pleased—and

supposing he put it out on mortgage, he would have £18 a-year interest coming in towards the annual payment of the £36. I will ask you to consider these figures carefully, and I think you will come to the same conclusion as myself, that to adopt such a division of the work is about as indiscreet an act as a tenant-farmer can do. Other causes retarding the progress of drainage well deserve attention; for they are due not to the bad execution of drainage-works, which is too often stated to be the case, but more frequently to a want of a right understanding of some important facts. Under-drainage has been supposed to be a work which, when once executed, requires no help on the part of those who are cultivating the drained farm, and that the drains themselves are not liable to any of those casualties which attend the acts of man, though man's best endeavours are but a minimum of defects. It is these assumptions more than anything else that are bringing drainage into disrepute. Lands laid out in ridges and furrows—the form of *surface* drainage adopted by our forefathers, when they converted our woods and wastes into ploughed fields—are still retained, though wholly inconsistent with *subsoil* drainage; and it must be manifest to everyone that so long as the shape of the surface will allow of the rain falling upon it to run from the ridge to the furrow, not only is the latter overloaded with water, and the under-drains placed at a disadvantage, but a system of robbery is going on at the same time, for a large proportion of the manure put on to the ridge is washed by the rain into the furrow, without any capability of turning it to account. It is needless to say that every pains should be taken to reduce the surface to an even condition—not by any rash effort made in one single year, but by degrees, and in several years, until the only furrows that exist shall be those known as "water-furrows," which are positively necessary to relieve the slacks and hollows formed by nature, and in which water will collect, so long as it retains its property of running to the lowest place. No under-drainage can wholly prevent this, and time must be allowed for absorption. In the west-midland and midland counties the high-backed lands have been so raised that two persons standing in different furrows are unable to see each other, while in the eastern counties such a form of surface is hardly known. Still, though the eastern counties have not to contend with these aboriginal deformities, there exists an indisposition with many farmers to take advantage of their facilities, and cultivate deeply. I have often heard men say that with a poor subsoil, shallow ploughing is better than deep. There cannot be a greater mistake than this, for as long as the plan established by ploughings in former generations is maintained by ploughing equally shallow, the results must be unsatisfactory. This remark is favourably illustrated by a circumstance within my own experience. In the years 1856-7-8 the General Land Drainage and Improvement Company drained the Hinxworth estate in Bedfordshire, the property of Mr. Robert Clutterbuck. As soon as the drainage was done, Mr. Clutterbuck took one of the farms lying on the gault of the green sand formation into his own hands, and set to work to cultivate it deeply. Unfortunately, he let it afterwards to a tenant inexperienced in the treatment of heavy lands, who soon gave it up in disgust, proclaiming the drainage a failure. There were not wanting persons in the neighbourhood to take the same view as the retiring tenant, and it was only after considerable difficulty that the farm was re-let. This time, however, the tenant was one who did understand that drained clay-land requires appropriate treatment, and he set to work accordingly. The result is expressed in the following letter from Mr. Clutterbuck himself, dated October the 4th, 1871: "I have just returned from Hinxworth, and after a pretty close inspection I think you will like to hear the result. The crops on my old farm have perfectly astonished me, and our old hopes have been realised, that the cold *undrainable* land has produced crops both in quality no less than quantity equal, possibly in some instances superior, to those grown upon the free open soils on the estate. I assure you I was delighted with what I saw. Mr. Newton, who occupies the farm, is really an intelligent person, and now that he has adopted steam ploughing, is perfectly satisfied with his future prospects. I found a double engine (Fowler) at work. Mr. Newton prefers the direct traction to the round-about system. On the other farms the tenants adopt steam ploughing also, and in fact an agricultural revolution has been effected in the parish; hedges are cut close after harvest, channels and outfalls are now cleared

out as a matter of course, and you would hardly recognise the place." As it is, in point of fact, a *sine qua non*, that the surface-soil should be broken up by deep cultivation, it is lucky for under-drainage that the gradual advance of steam cultivation will annihilate high-backed lauds, and force out of practice shallow ploughing. In making these remarks I am not presuming to lay down the law as a farmer, though I have had some experience in that line, but I speak as a constant observer of the acts of other men—those who, having experienced its benefits with deep cultivation, extol under-drainage as the foundation of good husbandry, as well as those who, having neglected proper surface treatment, complain of its failure. It may not be out of place here to read some impromptu lines, which I have used on a former occasion, expressive of the opinions I am now reiterating.

Ere we part, ye tillers of clay,
A few more words I've still to say.
When land is drained no "high-backs" keep,
But lay it flat and plough it deep.
No shallow work, but break the pan
The plough-share made when ploughing began.
"Water furrows" ye can't avoid,
Or ye will have your wheat destroy'd;
For rain collects where "slacks" exist,
Defying drains whate'er ye wist.
Autumn ploughing to catch the frost
Beats all spring work, though twice the cost.
Sow your seed early, wide in row,
And stir and clean with Garrett's hoe:
Ere the last sheaf is off the ground
Let the broadshare begin its round:
Don't force your acts 'gainst nature's will,
Though drain'd the land, 'tis clay land still.
With sun to scorch and wind to dry,
Break up the soil and searify;
But when your ground is filled with rain
Then your labour is worse than vain,
For each footmark, shod or cloven,
Only stamps the worst of sloven.

I can positively affirm that after five-and-twenty years' active investigation I have never known a single instance of failure of under-drainage where the work has, in the first instance, been properly done at a proper depth—never less than four feet in clays, and often reaching ten feet in free soils—and the surface has been deeply and timely cultivated; always reserving accidents which will occur in spite of every precaution and care, and with which I shall presently deal. I have had a great many cases brought under my notice, each proclaimed to be a "failure of drainage," which, upon examination, I have found to be unsatisfactory owing to causes wholly within the control of the occupying tenants, who have either avoided breaking up the surface pan, or who have forgotten that drainage does not alter the constituents of clay, but merely its condition, and that it is as wrong to plough and maul land in wet weather after it is drained as it was to do so before. The accidents which are beyond the control of both the drainer and the tenant-farmer are not so readily disposed of. How often have I heard the expression "Do you call this drainage?" when water has appeared on the surface in consequence of the drains being stopped by tree roots, or by the collection of sand, or of protoxide of iron? It is impossible to over-estimate the injury arising to under-drains from these causes. The mischief done to drains by tree roots is very considerable. Within this last month I have known £40 expended in clearing pipes of roots in a property of only 600 acres of heavy clay land. The drainage was executed in the years 1862-3, since which time the tenant has had reason to complain of the want of effect. Had the trees within reach of the drains been removed at the time the drainage was done, all objection might have been avoided, or had the drains been examined as soon as water was seen rising to the surface the evil might have been discovered and removed. As it was, however, the stoppages accumulated until the cost of the remedy reached the amount stated. In sandy districts the drains will at times become filled with sand, particularly where there has been a good deal of pressure of water from higher ground, and the sand itself has been very minute. No collars nor any other expedients will wholly prevent the influx of sand nor the choking of the pipes, where the run of water is variable and small in quantity

at times. I have in certain cases prevented the passage of sand into the pipe by wrapping the joints in muslin or calico, but this has not always been attended with success, and I feel bound, therefore, to state that, in spite of every possible precaution, stoppages will occur, and can only be remedied by taking up the pipes and clearing them as soon as the evil is suspected. In many parts, particularly in Wales, and the mining districts of Coruwall, Lancashire, and Yorkshire, protoxide of iron, locally called "car" is very troublesome, and though much good may be done by flushing the drains where there is a command of water, it is and will ever remain a frequent cause of stoppage. There is some consolation, however, in the fact that in the free soils comparatively few drains are in the first place required, and therefore the cost of remedy is not very great if the evil be taken in hand in good time. If, on the contrary, it is allowed to accumulate, the land will become quite as bad as it was before drainage. Upon large estates all these evils are to be avoided by making a competent man responsible for the maintenance of the whole work, both of drains and outlets. He should be picked out from among those workmen who had been engaged in the drainage when originally executed, and as he would know where to priek for the drains he would be able readily to remove obstructions. This is a practice I universally recommend, and upon an estate of several thousand acres a penny an acre will suffice to keep the drainage in proper order, inasmuch as a handy man receiving 15s. a week, and devoting five or six weeks in the course of the year upon each thousand acres would do all that is required. When once this arrangement is established, I find that the tenants are very willing to pay the penny an acre, as they have it in their power to have rectified at once anything that appears wrong. With small estates, where a man of this sort cannot be retained, it cannot be too strongly impressed upon those who occupy drained lands that to accidental causes and to a lack of proper surface treatment is to be attributed the majority of those consequences which they are too apt to consider defects of drainage. While pointing to these serious but unavoidable drawbacks, let me point out another source of dissatisfaction. I refer to the stoppage of drains by vermin such as foxes, rabbits, rats, and mice, which should be provided against, though it not unfrequently happens that gratings at the outlets if not attended to cause an evil greater than the one they are intended to remedy. I remember one case in which fault was found with the execution of the drainage in which the cause of stoppage was frogs. It appeared there had been a stream of frogs up a particular drain, that they had met with an obstacle, and had collected one on the other until they had become a compact block, which had the effect, as a matter of course, of stopping the flow. It seems almost childish to refer to such causes of mischief, but you may have observed how little prone all men are to express satisfaction with what they like, though vehement when they think they have any cause for complaint with work for which they have to pay. I am afraid tenant farmers are not exempt from this disposition, and that when their landlords, having drained their farms, require a return in the outlay, they are apt occasionally to find fault with us who carry out the work, I do not say without reason, but without making the same allowances which they would make, as a matter of course, had they executed them themselves. I had it in my power not long ago to prove to a tenant-farmer, who was not a believer in deep drainage, his too great readiness to condemn the work he had not taken the trouble to understand. Some test-holes, which had been dug from four to five feet deep, had remained full of water from the beginning of November to the end of January, when there occurred a severe frost. It was just as this frost was breaking, and when the thawing surface presented a wet aspect, that I went over the drainage with him. As we approached one of these holes, the tenant, with considerable vivacity, exclaimed "Look at the water in the test-holes; do you call this drainage?" Expecting from the nature of the soil, which was a marl of the new red sandstone, that there was no water below the ice, I requested my friend to come close to it; I then broke the ice, and found, as I had expected, that the water had escaped to the drains, and left the ice standing, and that on this ice surface water had collected in consequence of the thaw. You should have seen how my companion stared, and how he stared again and again into the hole when I pressed him to tell me where the water had gone, if the drains had not taken it away. But perhaps

the most fruitful cause of complaint respecting drainage arises from the inattention paid to the clearance of outfall streams and ditches into which the under-drains discharge, and to the maintenance of outlets existing by permission in adjoining properties. It is too frequently the fact that the outlets are not only under water, but that they are blocked by silt, weeds, and other kinds of impediments, which render them at times useless, and it is the obligation to keep the outlets clear of such obstacles, occasionally involving considerable expense, that serves to make deep drainage unpopular. I remember an instance where a tenant on a ducal estate in Lincolnshire, suffering from defective drainage, was unable to show me even the site of his principal outlet, which was intended to discharge the under-drainage water of a large area of land into an important watercourse, and although we looked for it for a long time, I had to leave without seeing it, and I do not know that he has found it to this day. These drawbacks are due to causes partly dependent on the tenant, who is responsible for the clearance of internal ditches, partly to the want of a clear understanding between landlord and tenant with regard to external ditches, which are of common use to several tenants and neighbours, and partly to the want of a ready legal means of clearing common outfalls at the joint expense of those who use them. It is rumoured that Lord Vernon, the late President of the Royal Agricultural Society of England, has it in contemplation to move in the House of Lords for a committee to inquire into the results of drainage executed under the several Improvement Acts, and I hope his lordship will embrace in the inquiry the several points to which I have referred, as well as the working of the third part of the Land Drainage Act, 1861, and the Drainage Act of 1847, commonly called Lord Lincoln's Act, with respect to outfalls through adjoining properties, which, if the real truth were known, do not meet the difficulties to which I have just referred in instances of an ordinary character which are daily met with. Having laid so much stress on defective surface treatment, and on the accidents affecting under-drainage, I do not wish to imply by doing so that all works systematically executed by agricultural engineers are free from objection; I am quite aware, on the contrary, that there are but few works which are not more or less defective, and I never yet myself drained an estate but that had I to do it over again I should not do it somewhat differently. All that the professional drainer can engage to do is to make as few errors as constant practice will ensure. In draining soils of an irregular character, in which peat exists or in which made earth occurs, it will frequently happen that though collars and wood have been used to support the pipes, that the effect of the whole will be unequal—that one part will shrink and sink while another part will remain at its original level, and I think I have experienced the objection in this country. Having now made a clear breast of matters, telling adversely, let me briefly illustrate the advantages which more generally attend under-drainage, by a single case within my own experience, which not unfairly tells the tale of many. Three-and-twenty years ago I became the agent of an estate in the midland counties. I found that its under-drainage had been commenced upon certain farms under the Public Monies Drainage Act, and it was one of my duties to continue the work on upwards of one thousand acres. A considerable portion of the estate being bolder clay was let before the drainage at from 15s. to 20s. an acre. Several of the drained farms were let on lease for fourteen years, and some of them have expired since I relinquished the agency. Last year I was requested by the owner to make an inspection of the estate, and I found that several of the farms had been re-let at nearly double the undrained rent, and that the occupying tenants were even better satisfied with them at this increased charge than they were when undrained at the low rents stated. The drainage being executed under the Improvement Acts, the borrowed money has had to be repaid by instalments, and that which was first taken up under the Public Monies Act will have been wholly repaid before the end of next year. The land drained will then be free of charge, and will stand at nearly double the rent obtained a quarter of a century back. I do not wish to be understood to claim the whole of this increase for the drainage, as the value of land generally, irrespective of the improvements effected, has increased in the neighbourhood, perhaps, 15 per cent., but I wish to convey the conviction that while undrained heavy lands have decidedly not risen to that extent, there are few instances where even the best free soils

have increased in value in the same degree as drained clay land when well cultivated. Without saying another word in proof of the direct advantage of under-drainage let me remind you of those natural benefits, which, being generally acknowledged, are almost unheeded. I refer to those indirect advantages which partake of the character of improved climate, rather than anything else. Whole districts have changed their character by the extension of under-drainage. Those places, which, a few years back, were signalised by constant ague and fever have become as healthy as the rest of the kingdom, and this is greatly, if not wholly, due to the influence of the drainage of certain large estates upon the locality. I remember on two occasions being thanked by different men—Lord Palmerston and Canon Blomfield—for the removal of fog and dampness from land they each often traversed, in nearly the same words, each declaring that the change in climate *had saved them a coat*. As to the effect of drainage on water supply, opinions vary, and we often hear it stated that the scarcity of water in dry seasons such as those of 1865 and 1870, is due to the drainage of land. My observations, extending over upwards of 20 years, enable me to record an opinion that the supply is increased and not diminished by drainage. I have invariably found that the discharge from drained lands into the outfalls will commence *before* the ditches of an undrained district receive any overflow from its surface. This is, doubtless, due to the fact that the whole of the interstitial spaces of sub-soil and surface-soil, which have been emptied of water by the summer's evaporation, have to be re-filled with rain before any water can run off the surface, and the levels of the drains being earlier reached than the ground surface, they commence their discharge proportionately earlier. Hence the rivers receive their first quota of perennial supply from drained lands. I have also invariably observed that the outfalls receiving the drainage of clay lands will continue to flow longer in the spring than the ditches passing through an undrained district of the same character. This may be due to the circumstance that saturated clay soils part very sparingly with their moisture by soakage into open ditches (though they are more disposed to do so when in contact with free soils, which are often thereby rendered productive), for it has been found in practice that the drainage of clay soils cannot be effectually performed by any number of open conduits, though they will part with their surplus wetness directly covered conduits or under-drains take the place of open drains. Let the cause of this be what it may, the facts can hardly be doubted, that the rivers receive from drained lands a contribution to their volume *earlier and later*, and therefore *longer*, than they do from undrained land, and that during the period of discharge a large proportion of the rainfall which would otherwise be lost by evaporation—and which I have shown to be equal to 100,000 gallons per acre on an average—is *added to the rivers* at a time when it is not wanted, and therefore when the addition may be stored, and subsequently utilized when water is scarce, and the flow of our rivers is diminished. I have here spoken of clay lands. It will be somewhat different with bogs and morasses at the heads of river systems. They are, as it were, sponges, which gradually disgorge the rain they absorb and hold, and when drained are reduced in their capacity as reservoirs. But even with these it is more than probable that the quantity of water rescued from evaporation by under-drainage more than balances the loss due to reduced sponge space. Having pointed out how readily the best designed works become defective by accident, I must express my regret that the mode of carrying out works under the Improvement Acts has not encouraged more originality of treatment, that in spite of the desire on the part of the Improvement Commissioners to secure the best result, the necessity of acting in accordance with recognized rules has kept us too closely to one particular system. In homogeneous soils, whether retentive clay or saturated sand, there is no doubt that a regular system of drainage is the best, unless irregularity of surface should interpose a difficulty, when the treatment should be modified. But equi-distant drains of equal depth are ridiculous, when applied, as they frequently are, to soils and surfaces varying in character and shape. The pertinence of these remarks will be manifest directly we have to treat land as a means of filtering liquid sewage from towns in addition to the rain from the clouds. After some opposition it is now pretty generally admitted that all land to which sewage is applied, whether by irrigation or intermittent filtration, must be under-drained if

the sewage is to pass through as well as over it, as it invariably should. No sewage should in either case descend direct from the surface to the drain, and it will be readily understood, therefore, that the "gridiron" system of drainage in free soils, in which it can be avoided, is inappropriate both for sewage farming and for sewage purification. In clay lands where, from the multiplicity of the necessary drains, it is impossible to avoid running the sewage directly over them, special manipulation is requisite to prevent the cracking of the subsoil as much as possible, and when impossible the direct passage of the sewage from surface to drain. This manipulation is a work of a compound character, involving the preparation of the surface-soil by proper cultivation, to a depth of from 15 to 16 inches, and by packing the pipes below, so that if the subsoil should still yield to the atmosphere, the crack shall not reach them. The 16 inches of pulverized soil will act on the clay subsoil in the same way as the brickmaker's straw acts upon unburnt bricks by protecting them from the direct action of the sun and wind. But I must not now go into these details, and I only thus cursorily refer to them to express my regret that, now we are entering upon a new phase of the drainage question, we have to admit that we have become too much the creatures of rule and regulation. This is evidenced by the facts that while the sanitary authorities of some towns have been obliged to stop or remove the drains originally laid as an agricultural work in the land they are using for irrigation, the authorities of other places are now copying the system sanctioned by the Inclosure Commissioners, under the belief that it is the best of all descriptions of under-drainage, and is as applicable to the cleansing of large bodies of foul water, as it is to the removal of surplus rain-water simply.

Mr. T. REEVES agreed with all the lecturer had stated, but asked on behalf of a friend whether, when draining upon hilly land, the drains should go down the hill in a straight line or across the hill. His own opinion was that they should go direct down the hill, but he should like to have Mr. Denton's opinion upon the matter.

Mr. T. HAYES would differ from Mr. Denton. He freely admitted, as far as practice was concerned, that Mr. Denton had had more than any other man in England, and, as far as the theory was concerned, he had the whole of it; but he had not the whole of the practice. He said that in all clay lands the drain should be always four feet deep, but he (Mr. Hayes) most decidedly objected to that, for though he was quite ready to admit that the practice was right in nineteen cases out of twenty, yet he was confident that there were some cases where four-feet drainage was wrong. If they could in all instances put the steam-engine into operation, drainage to the depth of four feet might always answer, but as there were so many difficulties in the way of the universal adoption of the steam-plough, it was not right always to drain to the depth of four feet. He instanced a case in his own experience, when he drained a piece of hops $3\frac{1}{2}$ feet deep every fifth alley, the land was ploughed deeply, and the soil well pulverised. That portion of the field, which was not of the most retentive clay, answered admirably, but in that portion which was of a close retentive clay, although it was tilled as deeply as the rest, the drains did not answer sufficiently to be practically useful. In the next summer there was a whole row gone; midway between the drains the bine did not average above three feet in height, while nearer the drains it was half way up the poles. In another field he found that the water did not run away, and he put in an intermediate drain about two feet nine inches, and that intermediate one did the work as well, and made the land as dry as the others which were $3\frac{1}{2}$ to four feet in depth. He was certain from what he had seen that excessively deep draining on close soils would not answer in all cases, though it might in nineteen cases out of twenty; Theory might say it did, but Practice sometimes proved otherwise. Mr. Denton told them that drains ran quicker than their ditches ran in undrained soils, but if they had intermediate drains, one feet one $2\frac{1}{2}$ feet, and the other four feet, the fleet one would run first. Therefore he could not understand Mr. Denton's theory, because if it were so the bottoms below the drains must be filled with water. He thought it better to spend £6 per acre in placing the drains closer together, and not so deep.

Mr. R. TROUBECK asked what should be their guide as to the outfall; what should be their guide as to the number of main drains; what should be the distance apart of arterial

drains; and what, in Mr. Denton's opinion, should be the proper depth, having regard to the money laid out?

Mr. GEORGE OYLER said, as a pipe-maker, he should lay them pretty thick.

Mr. PLOMLEY asked whether it was not advantageous to put manure on the top of the tiles in draining clay lands, so as to make them more porous, and to assist filtration, or whether, instead of placing the pipes three feet or three-and-a-half feet, the pipes should not be put on the top of the clay? He also inquired whether two-inch or inch-and-a-half pipes should be used, and whether the water got into the drain as it descended, or by capillary attraction?

Mr. WILLIAM REEVES asked whether it was not desirable to place a stratum of burnt earth upon stiff lands, to assist filtration, and also whether Mr. Denton would recommend separate outfalls for each drain, or one main drain with one outfall?

Mr. A. CHITTENDEN said his idea in draining was not so much how he should get rid of the water that came down from heaven, as how to turn his piece of wet land into something as nearly approaching that which his neighbour had which was called dry land. He went to the depth of three feet or four feet, according to his judgment, taking into consideration the nature of the subsoil, as well as the surface soil, for sometimes by going to the depth of four feet he got through the subsoil into the soil which contained troublesome water beneath. In some instances it might be wiser to place their drains closer together, and to plant them at three feet instead of four feet, but there was nothing like four feet if they wanted to carry away the water. In moderately rainy seasons the rain would go through the land and do more good than if it ran off, but he had never seen an instance in which draining was not remunerative, but for the trouble and money expended upon it. Of course, if they drained land and then let it alone as a common, the drains would be a long time before they acted, and comparatively little benefit would be experienced, but if they began to plough they would assist the water in its descent, and the more assistance they gave in that manner the better the water would percolate the soil, the more freely the drains would act, and the more benefit they would derive from them.

Mr. BAILEY DENTON, in reviewing all the questions that had been asked him, was afraid that he might not answer them so tersely as they had been put, and as if he had been prepared; but if he did not make himself understood, he trusted they would put them to him again. Mr. Chittenden seemed to know something about the subsoil as well as the surface-soil, and therefore must have been acquainted with steam cultivation. He would tell them that he looked upon under-drainage as approaching a fallacy altogether if it were not followed by deep cultivation. As he stated in his Paper, it was a *sine qua non*; to fully develop the effects of drainage, they must follow it in clay lands by—he would not say steam cultivation—but deep cultivation. Water did not go into the drains at the top of the pipe, but falling upon the surface of the land, it descended perpendicularly to the level of the drains. It then went down and filled up the earth below the drains, there being a large air-space especially, in dry weather, and then, ascending, it went to the level of the drains, and began to simmer out with good effect. The depth of the pipe was thus the subterranean water-level of the land. Thus it followed that the water would enter a drain which was four feet below the surface more quickly than one which was only three feet deep. Water was 817 times heavier than air, and, therefore, did it not follow that the deeper the drain, the more readily the water would go down to it, because depth gave force to gravity? Water in the soil had greater force if it passed to the depth of four feet than if it passed only to the depth of three feet. He explained that there was no bottom-water which had not at one time been surface-water; for the source of all water was rain, and even what was called spring-water was at one time top-water. If they made their clays as porous as they should be, they would have the rain-water penetrate them as readily as it did in free soils. He did not agree with placing burnt clay on the top of the pipes; but if placed on the surface of the ground and ploughed deep, he was of opinion that it would answer, because it would make the land permeable. In the first layer of surface soil, that is the soil which the plough had disturbed, there existed air space to the extent of one-fourth of its whole bulk. If the subsoil were as per-

meable as the surface soil, the water would go through it as through a colander, so that the deeper they ploughed, the greater air space they got in the disturbed soil. Though he liked depth, and never drained himself less than four feet, yet all drains did good, from a mole trap to a four feet drain. The more they aired their land the better, and they might air it by a two-feet drain and do good. If he were restricted to spend a certain sum per acre, as he was very frequently, he should, in clay lands, be disposed to drain less than four feet deep, and put them more closely together. But they must not misunderstand him. He had farmed his land himself, and cultivated with steam; and with steam or deep cultivation he could put his drains much wider apart than in ordinary cultivation. He explained that it was necessary for the Government, in the case of tenants for life, to determine that the drains must be four feet deep, because it might affect the successor to the land, for if they were less than four feet in shallow parts, the drains would be much nearer the surface, and if the standard were altered it would be likely that the drains in the shallow parts would become disturbed by the plough, and the whole of the drainage interfered with. He had been asked whether he would adopt separate outlets to every drain. Certainly not, for this reason. If they multiplied their outlets they multiplied the danger from obstruction; but about the proper number of acres to each outlet, in his opinion, was ten acres, and in respect to the length of the drains, that should be about 40 yards. In answer to the question as to what distance apart the drains should be placed, he was of opinion that in clay lands the

distance should be from seven to twelve yards, and between these two limits he was now draining a piece of clay land. With respect to free soils the best way, and only sound way, was by test holes filled with water. Begin by digging one drain, and see if it carried off the water; if not, place it nearer, until it would take out the water. The question as to whether the drain should be taken down hill or across had been answered by Mr. Thomas Reeves. In conclusion, he stated that he was sure Mr. Hayes meant no reflection upon him when he characterised him as a theorist, for he considered theory, to be worth the name, must be based upon practice, and was the result of practice. It was, in point of fact, a clear exposition of the reasons upon which practice was based. He had not studied the art of speaking, but he believed he could give a good reason for what he did, and he repeated that if he had not made himself understood he should be glad to reply to any further question.

Mr. HAYES said Mr. Denton had not noticed the point he mentioned, where, in the middle of the drains, when the land was ploughed deeply, the results were unfavourable. Having again described the system of cultivation, and the unfavourable results,

Mr. DENTON replied, stating that he had told them that he had found in practice that they could widen the interval between the drains by going deeper, and he had never found but that in time, though there might be inequalities at first, the whole space between the drains became equal.

The CHAIRMAN proposed a vote of thanks to Mr. Bailey Denton; that gentleman having replied, the meeting broke up.

THE BATH AND WEST OF ENGLAND SOCIETY, AND SOUTHERN COUNTIES ASSOCIATION.

The monthly Council Meeting was held on Tuesday, March 26th, at the White Lion, Bristol; Mr. R. Neville-Grenville, M.P., in the chair. There were also present Sir J. T. B. Duckworth, Bart.; Sir Massey Lopes, Bart., M.P.; Hon. and Rev. J. T. Boscawen, Messrs. J. D. Allen, J. C. Best, R. Bremridge, W. A. Bruce, C. Bush, R. H. Bush, Thomas Danger, J. T. Davy, John Daw, F. W. Dymond, Chas. Edwards, Mark Farrant, F. Gill, Jonathan Gray, J. D. Hancock, James Hole, H. P. Jones, J. Webb King, J. E. Knollys, Joseph Lush, H. A. F. Luttrell, H. St. John Maule, J. C. Moore Stevens, R. Neville, Thos. Phillpotts, C. A. W. Troyte, H. Williams, Thos. Woolcombe, W. Smith (Official Accountant), and J. Goodwin (Secretary and Editor).

THE MEETING OF 1873.—The deputation appointed to visit Bideford, Plymouth, and Newton Abbot, to inspect the sites proposed to be placed at the disposal of the Society for the meeting of 1873, reported favourably of the accommodation offered at each of the three towns, and bore testimony to their cordial reception and liberal entertainment by the authorities; they abstained, however, from recommending one town in preference to another, leaving it to the Council to make the selection.

Mr. J. C. MOORE STEVENS urged the claims of Bideford, and was seconded by Mr. Bremridge, who bore testimony to the very earnest manner in which the inhabitants of the town and neighbourhood had worked together in the hope of receiving the Society's visit.

Sir MASSEY LOPES advocated the claims of Plymouth, pointing out its special advantages with reference to population, railway accommodation, and easy access, not only from

Cornwall, but the entire county of Devon. Col. Luttrell, in seconding the proposition of Sir Massey Lopes, that Plymouth should be selected as the place of meeting, said it must be very gratifying to the Society that the county of Devon had come forward with such spirit to meet their requirements. It very seldom fell to their lot to have three such important towns anxious at the same time to receive and entertain the Society. The only regret of the Council was the impossibility of complying with the request of the three places at once, but after a careful and considerate review of all the circumstances, he believed it to be their duty to select Plymouth as their place of meeting.

After a discussion, in the course of which testimony was borne to the public spirit of the authorities and inhabitants of Bideford and Newton Abbot, the question as to which town should be selected was put from the chair, when seventeen votes were recorded in favour of Plymouth and eight in favour of Bideford. The meeting of 1873 will, therefore, be held at Plymouth.

Mr. Charles Edwards, of Wrington, was appointed Steward of Poultry in the place of Col. Brent, deceased.

The following new members were elected: W. Atkins, Littlebreedy, Dorchester; G. W. Collen, Chippenham; G. Culverwell, White Lackington House, Iminster; E. Ford, Newton Abbot; H. St. John Hall, Entry Hill, Bath; J. S. Lord, Milsome-street, Bath; J. Matthews, Middle Hill Farm, Wootton Bassett; J. Michael Shum, jun., Bath; I. Symes, Came, Dorchester; G. Symonds, Sydling, Dorchester; H. Taylor, Dorchester; J. Tucker, Over Moigne, Dorchester.

TENANT-RIGHT IN SCOTLAND.

"It is now more than twenty years since," to borrow his own words, that Mr. James Caird, when engaged as an Agricultural Commissioner for *The Times* newspaper, did all he could to write down the English TENANT-RIGHT principle, an effort in which he was strongly supported by the journal he represented. No man is so dogmatic over the business of farming as a Scotchman, and as in the outset *The Times* inquiry was conducted by two Scotchmen, any such national characteristics were of course tolerably apparent. Inferentially, if not directly, the cultivation of the Lothians was set up as the example for all the rest of the world, and with this the long lease was cited as the only system of tenure upon which profitable husbandry could be conducted. An almost contemptuous tone was, indeed, adopted when reporting from a district where the infallibility of a long lease was not observed. Continual comparison was drawn between the results arrived at under long and short holdings, and as a point to the argument the bad Custom of Surrey or Sussex was carefully confounded with the good Custom of Lincolnshire. The terms are thus stated in Mr. Caird's book: "A tenant must either be secured in the possession of his farm for a certain period, sufficiently long to enable him to receive the benefits of his investment, or have some precise agreement under which he is to be repaid, in fixed proportions, for his outlay, if his landlord should see fit to resume possession of the farm. Without either one or the other an improving tenant has no legal security for the capital he invests in the cultivation of another person's land." This as it stands, is fairly put enough, but Mr. Caird, writing "more than twenty years since," was as little disposed then as he is now to let the Lincolnshire principle rest on its own merits, but generally contrived to mix up, as he still does, in the same sentence or paragraph "compensation for unexhausted improvement" with "the plan of perpetuating obsolete practices paid for at the entry of the tenant, and therefore payable by his successor;" and so on. But could Mr. Caird then, or can he now name any obsolete practices which are perpetuated in Lincolnshire under the action of the TENANT-RIGHT principle? There are Customs and Customs; the good we uphold, and the bad we deprecate as strongly as Mr. Caird can; while, so far as we understand the foundation of our laws, these are frequently little more than the general extension of Customs which have been found to work well. Mr. Caird in his book continues thus: "That security he may obtain, either by being guaranteed by lease in the possession of his farm for such a number of years as will give time for his invested capital to have full effect and be returned to him; or, if the landlord declines to give a lease, by an agreement on a certain basis for compensation for unexhausted improvements when either party wishes to terminate the connection. One or other of these alternatives the improving farmer is fairly entitled to expect, and for the reasons now to be given we most strongly recommend the general adoption of leases in preference to TENANT-RIGHT." And so we go on to gather that "it is not desirable to extend either legally or conventionally the English TENANT-RIGHT to other parts of the kingdom;" and, again, that "the wish for leases will increase when the tenant-at-will discovers that security for his capital by TENANT-RIGHT is neither possible nor desirable."

Let us allow that Mr. Caird was here confining him-

self to England, and so far, as we have said before now, this is about the very worst prophecy that ever was made. But let us for a moment look a little further afield, or follow Mr. Caird home again for his authority. "Nothing in Scotland impressed me so much as a drive through a portion of East Lothian, in company with Mr. Hope of Feuton Barns, a vigorous advocate for the lease system, who showed me—with admirable honesty and impartiality—how small a proportion of farmers in his district did contrive to sit out their leases. Although Mr. Hope and a few other farmers of the highest reputation would doubtless not hold a farm without a lease, many very good farmers who have not that public reputation which would induce their landlords to keep them as tenants, except under the condition of offering the highest rent in an open competition, assured me that they would much prefer a TENANT-RIGHT Agreement." *Et tu, Brute!* Why, here are the very Lothians turning round on Mr. Caird, and discarding leases for TENANT-RIGHT, as demonstrated by the Editor in the *Journal* of the Royal Agricultural Society of England. And "more than twenty years since," noticeably enough, Mr. Pusey, the first Editor of that same *Journal*, was writing up TENANT-RIGHT when Mr. Caird was writing it down.

But further still, as if only to confirm Mr. Jenkins in his statements and opinions, Mr. Caird actually publishes a letter in *The Times* of Monday last, under the heading of "Tenant-Right in Scotland," wherein he tells the story of the Feuton Barns eviction, and how Mr. Hope "must leave it, and leave his improvements behind him without one farthing of compensation." And this in the Lothians! And this under "a twenty-one years' lease, with liberal covenants"! There can be no possible mistake about it; for, as Mr. Caird goes on to tell us, "in East Lothian where, as in this case, the unexhausted improvements are patent, obvious, universally admitted, the law permits the whole to be absorbed by the landlord as completely as if they had been the creation of his industry, his intelligence, and his capital, and not those of Mr. Hope." And the law, as Mr. Caird should have said as a point to his letter, permits precisely the same kind of thing in the greater part of England and Wales; thanks mainly to Mr. Caird, to *The Times*, and the like of them, who have done everything in their power to prevent the extension of any sounder principle. Our contemporary, *The Gardener's Chronicle*, of Saturday, says, "Mr. Caird is one of Her Majesty's Enclosure Commissioners, and thus the officer of all others in Her Majesty's service who may be considered most nearly Minister of Agriculture. He had, previous to his appointment in this capacity, been for many years the most active representative of the agricultural interest in Parliament, and for thirty years he has been known as a leading agricultural authority in this country." And we say that as an agricultural authority Mr. Caird's career, as shown by his own writings, has been very much of a mistake. If, as an Enclosure Commissioner, an almost Minister of Agriculture, a representative of the Agricultural interest in Parliament, and a leading agricultural authority in the country, he had advocated instead of opposing TENANT-RIGHT, Mr. Hope might not have "left his improvements behind him without one farthing of compensation." Mr. Caird now says, tardily enough, that under a lease "the law should extend to the tenant such rights as would ensure good farming to the

close by enabling him to obtain in case of disturbance full payment for that condition which he has added to the soil, and which has a clear and appreciable value." Of course this is merely the Lincolnshire TENANT-RIGHT, put in rather a round-about way, as if Mr. Caird were even now reluctant to admit as much; and of course this only confirms an opinion we have over and over again maintained in this journal, that no system of tenure—an annual or a two years' agreement, or a twenty-one years' lease—can be complete without compensation covenants. If Mr. Caird's story in *The Times* have any application or moral whatever, it is the necessity for some general recognition of the Lincolnshire TENANT-RIGHT. Mr. Caird's "liberal" covenants, so far as we can understand his own interpretation of them, refer mainly to liberty of action in preference to, or as a substitute for compensation clauses; but the last sentence in his letter of last Monday records his thorough recantation: "The TENANT must have a legal RIGHT to fair compensation for the capital which he cannot remove."

At Norwich the other day, Lord Leicester honestly enough drew attention to the most fatal flaw or omission in the new Holkham Lease: "He should like to refer to unexhausted improvements. Possibly compensation for these was not sufficiently provided for in the Holkham Lease. There were many things which a farmer put and left in the land that he might have worked out of it. If these were worked out it was clear the soil would be greatly injured; but if it was agreed that everything left in the land at the end of the lease belonged to the tenant, so that he could claim payment for them, the land would be greatly improved in condition, and farming would then prove better than under the existing 'up-and-down' system. With regard to the question of TENANT-RIGHT, which was really nothing more nor less than the Custom of the country, he would not now go into it, but leave that for future consideration." TENANT-RIGHT is, no doubt, the Custom of some counties, but, as we take it, this is not the Custom of Norfolk, where unless a man stipulated for its action he could claim no such allowances at the end of his term. Later in the day, however, Lord Leicester went on to explain the cause of this omission: "Since he came to the estate thirty years ago not a single tenant had left it. Thus there had arisen no question of compensation for unexhausted improvements, because the tenant himself was reaping the benefit of everything he put into the land." But this is not business, this is not argument, for the best of friends or families may part sooner or later. Lord Leicester and his tenants have been together for thirty years; "Mr. Hope, his father, and grandfather in succession have been on this estate for one hundred years, and on the farm of Fenton Barns for eighty." And yet Mr. Hope should have secured himself by compensation clauses for the day, as Lord Leicester says, when the question did arise.

TO THE EDITOR OF THE TIMES.

SIR,—Lord Derby has well said that silence in certain cases has its responsibility. It is under that responsibility that I seek the aid of your columns to bring into prominence an event that is filling the minds of the tenant-farmers of Scotland with indignation and alarm. Those who have known anything of the extraordinary progress of Scotch agriculture during the last 30 years must know something of George Hope, of Fenton Barns, in East Lothian. In his own country he has long held the highest place as a practical agriculturist, his example and advice are followed and sought by the leading farmers of the sister countries, and the most eminent agriculturists of foreign countries resort to his farms and profit by the instruction which he is always ready to communicate. If every farm in the United Kingdom were brought to the same high pitch of

cultivation as Mr. Hope's, it is not too much to say that at least one-half of the present vast importations of foreign corn might be dispensed with. Mr. Hope, his father, and grandfather, in succession, have been on this estate for 100 years, and on the farm of Fenton Barns for 80. In 1852 his lease was renewed by a former proprietor, at an increase of 15 per cent. on the previous rental. This was at the period of greatest depression following the final close of protective duties, when the average price of wheat had fallen to 38s. 6d. Shortly before this he had tile-drained the whole farm, at a cost to himself of upwards of £2,500. During the period this farm has been under Mr. Hope's management nearly one-fourth of it, which early in the century was so worthless as to be left waste, has been reclaimed by him and cultivated, and for many years has contributed to the rent-roll of the proprietor. Within the last seven years he has greatly added to the depth of active soil over the whole farm by the removal of hundreds of tons of stones from beneath the surface, and by the introduction of steam cultivation and heavy manuring. For many years back, and to the present moment, his expenditure beyond the resources of the farm, for manures and feeding stuffs, has been equal to two years' rental, being from £2,200 to £2,500 a year. The expenditure in wages and the employment of labour has been doubled. Mr. Hope was one of the first to introduce into East Lothian the cultivation of potatoes, for which the soil and climate have proved admirably adapted, and which, without an effort on the part of the landlord, has added largely to the rental without impoverishing either the land or the tenant. He is on suitable occasions an out-spoken man, who makes no secret of the profit which good farming has brought him, and he has been often blamed by his brother tenants for having done more by his own farming and frank speaking to raise rents in East Lothian than any other man in it. Mr. Hope has made Fenton Barns a well-known name, and it has not been ungrateful, as it has given him an adequate fortune. It was natural that this man should take a lead and be looked up to in all matters of local or national agricultural improvement. For forty years he has been one of the managing committee of the East Lothian Agricultural Society. He has served as a director of the Highland and Agricultural Society, and for many years has been on its various committees, and is an examiner for its diploma in agriculture. When the Scottish Chamber of Agriculture was formed, he was elected by his brother farmers to be its first chairman. He was nominated for the county in 1865, and, though he never asked a vote, and never even thought of standing until the day before the nomination, and with nearly all the landlord influence against him, he polled more than one-third of the voters. He was the trusted friend of Mr. Cobden and Mr. Bright during the early times of the Corn Law League. He was selected by the Government as one of the commissioners to inquire into the Law of Hypothec, and has contributed to the literature of the Game-laws by an able paper in the volume of "Recess Studies." His lease is drawing to a close. To use his own words, "I was prepared to pay a very large increase of rent. I don't know what I would not have given rather than flit, so perhaps it is well I should go, having no choice, while I retain my self-respect, never having had the shadow of a quarrel with either landlord or neighbour, and never having sought public duties, though I have never shunned them when they came in my way. I feel very sorry to leave this place; it has a grip of my heart." He must leave it, and leave his improvements behind him without one farthing of compensation. This man, of whom his county and his country are justly proud, has received notice from his landlord that his lease will not be renewed. At a meeting of the local society, held a fortnight ago, Mr. Nisbet Hamilton took occasion to characterize as libellous a statement made in a recent number of the Royal Agricultural Society's *Journal*, in regard to the frequent changes of tenants in East Lothian, and in doing so he challenged the accuracy of the information on which that statement had been made. Thus called upon, Mr. Hope responded to the challenge by stating that the author of the paper had obtained his information through him, that it was put down in a way which did not fully express his meaning, and that he thought it a pity, as his name was quoted by the writer, that the article had not been submitted to him in proof before being published; but that the facts which he gave were accurate, and capable of proof. Promptly,

on the following Monday, Mr. Hope received notice from Mr. Nisbet Hamilton's factor that his lease would not be renewed. Mr. Hope's speeches and writings are distasteful to his landlord, and Mr. Nisbet Hamilton hesitates not to sever a connexion which has subsisted for three generations, with a man who was an honour to the estate, whether as tenant, neighbour, or employer of labour. There is no pretence here that he made himself disagreeable on the subject of game, for he did not; or that he was obtrusive in the expression of his opinions on public affairs, for he was not. But he never shrank from that when he felt it a duty, though with all due respect for those with whom he differed. Other tenants on this estate who vote on the Liberal side, but make no other profession of their political opinions, have received renewals of their leases, but the independent expression and advocacy of such opinions are not to be tolerated. If this had occurred in Ireland, what would now be the legal remedy awarded by the Courts of Law to the tenant? He has every claim which long and undisputed possession can confer; his industry, his intelligence, and his capital have been unceasingly employed in enriching his landlord's property, while drawing from it the means of engaging well-paid and remunerative labour; and on every ground he would have established for himself the strongest and most substantial interest in the soil that the Irish Land Act embraces. He could claim payment for disturbances, for beneficial interest, for drainage and reclamation, for unexhausted improvements. In Ireland the law recognizes these as the legal right of the tenant, even when their existence can hardly be discovered. In East Lothian, where, as in this case, they are patent, obvious, universally admitted, the law permits the whole to be absorbed by the landlord as completely as if they had been the creation of his industry, his intelligence, and his capital, and not those of Mr. Hope. Mr. Nisbet Hamilton has thus, at a critical time, stirred up a large question. He and his friends dislike Mr. Hope's freedom of speech and of thought, and Mr. Hope is evicted. I will not treat this as a political question, for, though it may be so in this instance, it involves the general principle on this side of the Irish Channel of the rights of agricultural tenants, which find powerful advocates from enlightend men of all parties. The natural result of free competition in any business is the utmost development of individual enterprise. If the landowner is willing to devote his attention to the details of farming, he may keep the tenant's profit to himself by cultivating his own estate. But if, by reason either of personal disinclination, incapacity, or other occupation for his capital, time and talent, he prefers to let his land to an agricultural tenant, the law ought not to weight that tenant with any impediment, but it should recognise the same right of property in his capital as in that of the landlord. In good farming the agriculturist must expend liberally in view of a future return. The high condition of this land is the gradual result of yearly accumulations of good management, which cannot be drawn out of it at once like the deposit in his bank account. The farmer's capital in Great Britain thus attachable by the landlord is enormous, and the public advantage is so much concerned in the productive powers of our little island being fully developed, that every hindrance to the safe employment of the capital so invested should be removed. Nothing is more sensitive than capital, and yet nothing is more common than the complaint that the land of this country is not half farmed, because the tenant either has not or will not use adequate capital. What is the cause? His tenure is insecure; if overtaken by temporary misfortune, the result often of bad seasons, the law renders him liable to sharp expulsion and forfeiture of his sunk capital; if circumstances should render his removal desirable, he cannot dispose of the lease which his capital may have rendered valuable; that capital is exposed to injury by the undue preservation of game, and to confiscation if invested in buildings, reclamation, or drainage, absolutely needed for the productive cultivation of the land, but which the landlord was either unable or unwilling to execute at his own cost. It is now more than twenty years since I urged these views on public attention through your columns. Great strides have been made in agricultural improvement since that time, and yet Lord Derby was able to say only a few months back, with perfect truth, that, after all that high farming had done, the land of the country did not yield one-half of what it might be made to do if all our present resources were brought to bear upon the soil. "Security to the

tenant," he added, "is the first requisite, and I hold that any tenant good enough to be kept permanently on the land ought to have a lease if he wants one." I have seen no reason to change the opinion I then held of strong preference for a lease of 21 years with liberal covenants, as compared with yearly agreements and compensation for unexhausted improvements. The lease is safer for both parties, and if the principle is recognised by law that while the landlord has the exclusive right of property in the natural fertility of the soil the tenant has an equal right of property in its condition, I feel convinced that agricultural improvement will receive greater development under a general system of leases than yearly agreements. A fatal objection to the latter is their tendency to perpetuate obsolete practices, paid for at the entry of the tenant, and therefore payable by his successor. The lease gives the tenant a home and a feeling of security; its covenants may be so framed as to permit all reasonable latitude in cultivation, and the law should extend to the tenant such rights as would ensure good farming to the close by enabling him to obtain in case of disturbance full payment for that condition which he has added to the soil, and which has a clear and appreciable value. If this were now the law Mr. Hope could not have been evicted without fair compensation for his improvements, at least. The wrench from his home, with its associations, he must bear with such consolation as the universal sympathy of his friends and brother farmers in Scotland may afford. Lord Leicester, who has a hereditary right to speak with authority from the wise and liberal landlords' point of view, used these words in addressing the Norwich Chamber of Agriculture on leases on Saturday last: "My object in the first clause was, if possible, to grant the lease in perpetuity, so that at the end of the 16 years the tenant might renew. Since I came to the estate, 30 years ago, not a single tenant has left it. I quite agree as to the superiority of a lease over a two years' notice to quit, with ample compensation; for I cannot conceive that any 'compensation' would be equivalent to the removal of a man from his home. To me the country would not be worth living in if the associations between me and my tenantry were removed." Landlords who carry into practice these liberal sentiments need no legal obligations to keep them in the line of justice towards their tenants. It is the other class, represented by this gross case of tenant wrong, whose conduct in this instance has disclosed the possession of a crushing power of oppression by the use of a legal right, which can be effectually controlled only by erecting a corresponding legal right in the tenant to fair compensation for the capital which he cannot remove.

I am, sir, your obedient servant,
JAMES CAIRD.

WEST NORFOLK CHAMBER OF AGRICULTURE.

—At a recent meeting at Lynn, the following resolution was proposed by the Chairman, the Rev. T. L. Brereton seconded by Mr. T. Blyth, and carried: "That to take the endowments intended for elementary schools, and apply them to secondary and middle-class education, would not be right unless by legal enforcement; the support of elementary schools should be made a general charge upon property. If that were done it might be then right to relieve the owners of property so charged by transferring to their use the endowments which would thus have become superfluous for the labouring class. But this Chamber is not prepared to recommend compulsory and gratuitous elementary education, believing that whatever may be the effect of such a system on other countries, in England the result would be an aggravation of the mischievous tendency of the Poor-law to lead the people to look to other sources of maintenance than their earnings. But it would, in the opinion of this Chamber, be very desirable that the endowments generally, and especially those properly applicable to secondary education, should be combined and organised so as to remove the scandal of their present general stagnation; and with this view 'the County' appears to offer the best basis of organization. Under combined management the capital of the endowments might, so far as needed, be withdrawn from its present investment, and in conjunction with other capital voluntarily subscribed, be expended in school-buildings and furniture, so long as a satisfactory guarantee could be provided against the loss or diminution of the capital so expended."

WIGTON FARMERS' CLUB.

At a meeting of this Club, Mr. William Lawson in the chair, Mr. C. D. Hunter, of Blennerhasset, read a paper on Manures and Field Experiments.

Mr. HUNTER, who acts as the agricultural chemist on Mr. W. Lawson's Blennerhasset farm, commenced his paper by some remarks on the value of scientific experiments in agriculture; and after a little introductory matter about his own experiments, went on—On seeds, nitrate of soda applied alone in 1868-9-70-1, gave as the average of the four years 5½ stones of hay for every cwt. of manure applied; when used along with superphosphate and muriate of potash it gave 58 stones of hay per cwt. Sulphate of ammonia used alone gave 50 stones of hay per cwt., and in conjunction with mineral manure 48½ stones. Peruvian guano, again, used alone for three years, gave about eight stones less than sulphate of ammonia for the same period, or equal to 42 stones; and in mixture it gave equal to 30 stones. Nitrate of soda, it will be seen, proved the best nitrogenous manure for hay, and also went furthest when used with a mineral manure. On a clay soil I have only one experiment, tried last season on All-hallows Commons. The land was in very poor condition; the unmanured crop weighing only about 10 cwt. per acre. On this poor clay, sulphate of ammonia proved superior, giving when applied alone a return of 65 stones per cwt. of manure and with superphosphate and muriate of potash 95 stones. Nitrate of soda gave alone 39 stones of hay, and in mixture 66 per cwt. The experiments on oats are more trustworthy, but having been tried on but one soil and under the unusual conditions of three years on the same land, they must not be regarded as entirely applicable to ordinary farming. From a want of reliable no-manure and mineral-manure plots for comparison, the figures given may be, as a whole, a little too high or too low; but the comparisons between the three manures are quite exact. Applied alone, sulphate of ammonia proved superior for oats; and, taking its return per cwt. of manure at 12 stones of corn, Peruvian guano gave 11, and nitrate of soda nearly seven stones. Applied in conjunction with mineral manure, nitrate of soda proved superior; and, taking its return per cwt. at 20 stones, sulphate of ammonia gave 13, and Peruvian guano 17 stones. It is rather curious to find nitrate of soda last when used alone, and first when in mixture; further experiments may but confirm this fact, but without further trial I could not undertake to say which was the best manure for oats. One point seems, however, pretty well established—namely, that sulphate of ammonia and Peruvian guano proved of nearly equal value in both cases. The guano used was the Chincha Island of best quality, the supplies of which are now exhausted; but any good guano containing over six or eight per cent. of ammonia will prove a good corn manure; but in purchasing see that you do not buy a “pig in a poke.” Require a guaranteed analysis of the vendor, or you may pay £13 or £14 for a manure not worth more than £7. Barley was also experimented with for three years upon the same soil; the same remark applies to this as to oats—namely, that the weight, as a whole, may be a little too high or otherwise, but that the comparisons are just enough. Nitrate of soda here takes a decided lead all through, and, taking its return per cwt. of manure at 20 stones of corn, Peruvian guano gives only nine stones. Sulphate of ammonia was not tried alone, but in mixture proved superior to Peruvian guano; thus, nitrate of soda, used with mineral manure, gave about 14 stones of corn, sulphate of ammonia 11½, and Peruvian guano about seven stones per cwt. of nitrogenous manure. This shows nitrate of soda twice as valuable for barley as Peruvian guano, and slightly superior to sulphate of ammonia. On potatoes I have experimented very largely, and have, from over 400 trials, a number of very valuable facts bearing upon the seed cultivation and manuring for this crop. An average of six very reliable plots gives 161 stones of potatoes as the produce per cwt. of sulphate of ammonia, used in conjunction with superphosphate of nitrate of potash; Peruvian guano, in the three years' trial, against this gave equal to 99 stones, and nitrate of soda 39 stones. Some other experiments place

nitrate of soda still lower, and two trials with Peruvian guano, used alone, give 8½ stones per cwt. of manure, but these are not strictly comparable with the others, being on different soil each year. From the foregoing experiments on nitrogenous manures, it is evident that the value of a manure is affected by the source of its nitrogen as well as by its amount, and that a statement of the raw materials used in making the manure is essential to a correct estimate of its value. An analysis protects the farmer from adulteration, and a composition may protect him from misapplication; thus, if these results hold good on the generality of light soils in Cumberland, it is evident that a potato manure containing nitrate of soda is much inferior to one containing sulphate of ammonia, though both may analyse the same per-centage of nitrogen; four per cent. of this being supplied by either 16 per cent. of sulphate of ammonia or by 26 of nitrate of soda. Again, suppose two grass manures, and let one contain 30 per cent. of nitrate of soda, this would make it analyse about four-and-three-quarters per cent. of nitrogen, and it would be better value for light land than one analysing five per cent. of nitrogen furnished by 20 per cent. of sulphate of ammonia, though the latter—if the one experiment on light land proves of general application—would be of more value again for stiff soils. Time will not permit of further illustration of this point, but enough has been said to show what a wide and profitable field this opens up for investigation and experiment, and how necessary is a more complete knowledge of purchased manures than is furnished by a published analysis. The phosphates next demand our attention, as being after nitrogen the most important of our manurial substances. Bones, guano, and the mineral phosphates are the principal sources of supply. In the raw state the latter are of course almost valueless; but in the dissolved state, as bone or mineral superphosphate, their value in the field is the same—and soluble phosphates from bone are of no more value than those from coprolites. Superphosphate of any kind applied alone is as a rule wastefully used. Three experiments give it a value of six-and-a-half stones of hay per cwt. of manure so applied, and as the superphosphate costs about 5s. 6d., and the hay is only valued at 3s. 3d., it is evident that this will not pay. Used in conjunction with muriate of potash and nitrogenous manures it did much better, three experiments giving a value of 17 stones per cwt. of superphosphate. It is noteworthy that in the same series of experiments it was applied to 2 plots along with nitrogenous manure, but without muriate of potash, and its value here at once fell to 10 stones of hay. This shows how one manure helps another, and that on soils deficient in potash a good manure wanting in this element is used at a great disadvantage. Plants require many elements for complete growth, and the superabundance of one can never make up for the absence of a tenth. For all crops, but more especially the root crops, phosphates are invaluable. So much, however, is already known concerning this manure, that I will not take up your time with further details, but will rather discuss those less known materials which are daily coming more into use. Potash, from the prominent figure it makes in the ash analyses of all plants, has always held a high place in agricultural science; but till quite recently its price forbade its use in agricultural practice. The discovery of potash deposits in Germany was the first circumstance that brought potash manures into general use. In 1867, when I first experimented with potash, I could purchase at £7 10s. per ton the same article for which I must now pay £12 or £13. Muriate of potash, sulphate of potash, kainit, and crude potash salts are the chief sources of this manure. In 1868-9-70 I tried the first two on potatoes and clover seeds. Potash salts should not be used alone. Three years' trial of muriate of potash at the rate of four cwt. per acre gave it a value of nearly six stones of hay per cwt. of manure; two of these years gave it, however, a value of about eight and a quarter stones. Sulphate of potash gave 15 stones; probably its superiority to the muriate is due to the fact that sulphuric acid is more essential to plant life of the muriate. On potatoes its supe-

riority is more doubtful, and probably when used with superphosphate, sulphate of ammonia, and other manures containing much sulphuric acid, its superiority would be less evident; further experiments are, however, required to decide this point—the greater abundance and less cost of the muriate also makes it more desirable as a manure. Used along with nitrogenous manures and superphosphate, muriate of potash showed much better results, giving per cwt. of manure 14 stones of hay; this, though not immediately profitable, is so nearly so that in all probability the after effects more than repaid the outlay—and I would recommend that for light land a good grass manure should contain from 10 to 20 per cent. of muriate of potash, equal to from 5 to 10 per cent. of potash. I prefer muriate of potash to kainit or inferior potash salts, because as a rule it contains four times more potash; this saves three-fourths railway carriage, and to your land you can apply one cwt. of potash without being necessitated to apply at the same time nine cwt. of salt and magnesia, which an equal dressing with kainit would entail—such large quantities of soluble salts nearly always prove injurious to every crop, except perhaps mangel. In 1870 I tested kainit against muriate of potash for potatoes, and from the results on four plots of each, the muriate proved itself about five times more valuable. For potatoes, potash has shown itself indispensable. In two experiments where it was mixed with lime and salt and applied both alone and with farmyard manure, it gave the first year per cwt. of muriate, 49 stones of potatoes; the second year, 64; and the third year, 104 stones. With farmyard manure nearly one-and-a-quarter cwt. was used, mixed with an equal quantity of salt and one-and-a-half cwt. of lime; alone, nearly double these quantities were used. Applied in conjunction with superphosphate and sulphate of ammonia it gave over two years an average return in four experiments of over 250 stones of potatoes per cwt. of muriate; this was, however, the second and third years on the same soil, and is thus unusually high. It was tried with superphosphate against superphosphate and salt—four cwt. of each—for three years in three different fields, and gave 55 stones of potatoes per cwt. of muriate; when added alone to superphosphate it gave only 12 stones, and in one experiment, used alone, it gave 43 stones. From these experiments it is evident that neither for hay nor potatoes should potash be used alone. Plant life is in some respects not unlike animal life, and you might as well expect good health in an animal fed on water alone, or on straw alone, as in a plant fed on but one manure. A good potato manure should always contain from 15 to 25 per cent. of muriate of potash, equal to seven to twelve of potash. On carrots, after the failure of 1868, I did not again find time to experiment till last season, when the addition of two cwt. of muriate of potash to a mixed manure of superphosphate and sulphate of ammonia raised the produce nearly eight tons per acre. On turnips, I have but few reliable experiments, but these go to show that a good turnip manure should contain some potash, though less is required than for potatoes. For grain crops I cannot recommend potash; in special cases it may be useful, but for general purposes its presence is unnecessary. Magnesia is also usually present in the ash of plants to a considerable extent, and has often been recommended for hay and potatoes. In repeated trials I have not found its application attended with much benefit. Eight experiments on potatoes gave it the low value of five pounds of potatoes from one cwt. of sulphate of magnesia, that is six shillings' worth of manure to produce twopence worth of potatoes. In these experiments it was used in conjunction with superphosphate, potash, and salt, without any nitrogenous manure; further experiments with nitrogenous manures did not show any better result. On clover seeds, the balance of six experiments with two cwt. per acre of sulphate of magnesia, give it a value per cwt. of one stone of hay; it gave the best result—12 stones—when used in conjunction with muriate of potash, common salt, and a little sulphate of ammonia, neither of the first two containing any sulphuric acid; and the poorest result was when added to sulphate of salt and sulphate of ammonia, a mixture containing an abundant supply of sulphuric acid. These facts point to the sulphuric acid of the sulphate of magnesia as the active portion of this manure in these experiments, but neither upon seeds nor potatoes did it pay one fourth of its cost. Salt is the last manure I shall touch upon. It has been strongly recommended by interested parties, and has doubtless its uses, but as a rule it is more serviceable as a destroyer than as a

plant food. Against grub, wireworm, &c., and as a prolonger of vegetation in dry seasons, it is of value, but as a direct manure it more frequently does harm than good. On hay, four hundredweight per acre applied alone reduced the crop in two experiments, and increased it in two, the balance showing 8 lbs. of hay per cwt. of salt. This seems a common result throughout all England, as thirteen experiments reported by Dr Voelcker show only 47 lbs. of hay for four cwt. of salt per acre. The addition of about two cwt. of salt to a mixed manure for seeds reduced the produce in seven experiments by more than two-and-a-half cwt. of hay per acre. The balance of testimony is thus against its use as a direct manure for hay. On potatoes, used alone, it seems to have been of service, giving nearly seventeen stones of potatoes per cwt. of salt, but when added to a really profitable manure like superphosphate it almost invariably reduced the crop. It is rather an interesting fact that, though often found in the ash of plants as soda, it is sometimes absent, and for some plants its presence is not necessary to a healthy growth. The presence of a large quantity of salt in kainit, though quoted by the vendors as an advantage, is quite the reverse, as you cannot supply as much much potash as you require without applying also a quantity of salt, which is almost certain to interfere with natural growth, and farmers can ill afford to reduce their crops, and still less to pay for such reduction. These are the most salient features of our for years of field experimenting on manures at Blennerhasset. I much fear that I have gone over them somewhat hurriedly, and trust that any point not made quite plain will be the subject of a question at the conclusion. The details of many of the experiments are very interesting, but as I intend publishing these as time permits, I have the more willingly omitted much of interest, condensing and generalizing the results as above. To put them in a practical form, I will give the composition of several manures, as suggested by the foregoing results:

	Per acre.	Nit. of Soda.	Sulphate of Am.	Superphos.	Mur. of Potash.	Total
		cwts.	cwts.	cwts.	cwts.	cwts.
Hay	1½	—	3½	1	6
Oats...	1½	1½	3	—	4½
Barley	1½	—	3	—	4½
Potatoes	—	2½	6½	3	12
Turnips	—	1	3	1	5

The CHAIRMAN asked the lecturer whether, in his opinion, the value of salt in agriculture did not very much depend on the proximity of the land to the sea? Probably the salt would be of greater value away from the coast than near to it.

Mr. HUNTER said he had heard it said that salt was not quite so useful near the sea coast as inland; but, from the thirteen experiments made by Dr. Voelcker, it was shown that he got only 47 lbs. of hay for 4 cwt. of salt. So that these experiments, in thirteen different parts of England, showed no better results than his experiments with salt at Blennerhasset; which went to prove that it was not of much value. Many plants, indeed, could grow without any soda at all—and salt was the basis of soda.

Mr. DALTON said they had tried experiments with nitrate of soda especially, and they found it answer with nearly every kind of crop. They had tried it on their farm at Aglionby, near Carlisle, and had found it most beneficial. They did not apply it alone, but always mixed it. With regard to salt, perhaps they did not use it as a direct manure, but they found it also very useful on potato and turnip soils; it might be that it acted in destroying grubs, but it was beneficial, keeping the soil open, and rendering them a larger crop in weight when salt was used in mixture than when manures were applied without salt. Their practice was to mix their manure thoroughly with salt, and then apply it to potatoes, mangolds, and turnips. For the grass land they generally mixed the nitrate of soda either with acid or with a little guano. They used a phosphatic manure in mixture [with nitrate of soda, and it greatly favoured the growth of grass, especially of meadows for hay. They had a meadow in the neighbourhood of Botcherby, to which they applied a phosphatic guano and nitrate of soda, and had the most wonderful results; in fact, nitrate of soda had proved most useful, and so had salt, especially for mangolds, potatoes, and turnips.

Mr. HUNTER said the only possible object in mixing ni-

trate of soda was to get it sown more evenly. For that purpose it mixed very well with gypsum or hot lime. The hot lime would destroy guano with sulphate of ammonia, but it did not affect nitrate of soda. He had himself never experimented with salt on mangolds, but it was a common saying that mangold "paid well" with salt.

Mr. HORNSBY asked if Mr. Hunter had ever tried superphosphates alone, or in addition to farm-yard manure? He had tried nitrate of soda to some extent, with the best results on grass-land, his being rather strong land, with a cold bottom.

Mr. HUNTER said he had never tried superphosphates along with farm-yard manure. He had tried it alone on grass-land and with potatoes. It always gave a heavier crop, but he never found it pay when used alone; it required some nitrogenous manure along with it, and also, on such light land as theirs, some potash. Lime, salt, and potash, applied along with dung in the proportion of about 1 cwt. of each, gave the first year an extra crop of about 13 cwt. per acre of potatoes, the second year more, and the third year a good deal more.

Mr. GRAINGER asked as to his experiments with bones.

Mr. HUNTER said he had tried bones and bone-dust on grass-land, but bone-dust did not pay. For three years he tried both, and curious to say, looking at the results of the whole period, he found that bone-dust and guano and dissolved bones and guano produced exactly the same result, viz., each something like 15½ tons of potatoes per acre in three years, or about 5½ each year. He could not recommend bones alone. Dissolved bones, indeed, were a lasting manure, but there was no difference between soluble phosphates of bone and coprolites. It was the insoluble phosphates which were much superior. He had tried kainit on potatoes, and also muriate of potash—4 plots of each. Sometimes one did better than another; but taking the four together, the muriate of potash did much better than kainit, and the conclusion he came to was that it was worth about five times more than the ordinary kainit. But they must apply so much soda or magnesia along with it, because it only contained about 12 per cent. of potash, and they had to apply the others along with it, or it rather hurt the crop.

Mr. GRAINGER asked if he had never sown his manure on grass in autumn?

Mr. HUNTER said not till this last year, and he doubted whether he would be in this part of the country to test the re-

sult by weighing. He went on to say that what they bought for dissolved bones were not dissolved bones, because the makers would not make them, as their reputation would suffer if they sent out the nasty, dirty-looking thing which dissolved bones were. Instead, they sent out a nice preparation consisting perhaps one-third of bone and two-thirds of coprolites. If they wanted dissolved bones they must make them themselves.

Mr. DALTON: Which do you consider best, Peruvian guano, containing 13 per cent. of ammonia and 8 per cent. of soluble phosphates, or that containing 8 per cent. of ammonia and 20 or 22 per cent. of soluble phosphates?

Mr. HUNTER: If you will put down the cost of ammonia at 16s. per unit, and phosphates at about 2s. 3d. per unit, you can at once get the value for yourself. These figures are about the mark of what they are selling for just now.

The CHAIRMAN said Mr. Hunter published the result of some experiments with superphosphates in a local paper, and a person (Mr. C. Vynne) wrote saying that those experiments confirmed him in his opinion that bone manure was much to be preferred to anything else, whereas the experiments went to show the contrary.

Mr. HUNTER said last last year he tried dissolved bones—that is, commercial dissolved bones—against superphosphates on turnips, and he got 13 cwt. more from the dissolved coprolites than from the dissolved bones. He did not mean to say that every experiment would be found against them, but this experiment was decidedly against dissolved bones. They were mixed with sulphate of ammonia, muriate of potash, salt, and gypsum, and everything that could give them strength, so that it was a fair trial with the dissolved coprolites.

Mr. McMECHAN moved, and Mr. DALTON seconded, a vote of thanks to Mr. Lawson, whose experiments at Blennerhasset, though unsuccessful in one sense, had contributed valuable information to agriculturists.

Mr. HORNSBY moved, and Mr. GRAINGER seconded, a vote of thanks to the lecturer, who, in reply, said it was Mr. Lawson who bore the expense of the experiments.

The CHAIRMAN, in reply, admitted that, as a commercial undertaking, the Blennerhasset farming experiment did not profess to be a success. It was an experimental farm essentially, and though it had failed commercially, perhaps it had shown to more practical people how it might have been used successfully.

LAVENHAM FARMERS' CLUB.

SUGAR-BEET.

At the last meeting, Mr. Wm. Biddell in the chair, the subject for discussion was "The Cultivation of Sugar-beet in Relation to the Production of Sugar," introduced by Mr. J. H. Porter, the manager of Mr. Duncan's sugar factory at Lavenham.

Mr. PORTER said: It is a certain satisfaction to find that in the cultivation of this much-talked of sugar-beet there is really very little to be done beyond, or differing from, that they understood so well and probably practise year by year. Indeed this may be said to be one of the strong points of argument in favour of the adoption of this plant into the ordinary farming of this country, where its humbler kindred have long since found a home and thrived. If to this be added that in those neighbouring counties where the beet-sugar industry has, within the memory of men yet young, attained to gigantic proportions, the climate as equally cool, and moist, and variable with our own, we have another argument, plain and practical and strong, in furtherance of its adoption here. Referring next to what had been done in Lavenham and the neighbourhood, he observed: For three or four successive seasons several gentlemen I see present this evening have assisted Mr. Duncan in trying out the practical experiment, upon a scale of some magnitude, of growing beetroot-sugar in England; for, as in each of the last two seasons, about £7,500 worth of sugar has been extracted from the roots grown here, I may say that the experiment has been conducted upon a scale commercially appreciable both to the farmer and

the manufacturer; and with results—let me add—encouraging, not to say satisfactory to both. So encouraging, at all events, that both manufacturer and farmer have agreed to go upon a yet larger scale, which, I hope and believe, will lead them on to a yet more confirmed success. He then proceeded to refer to high authorities on the subject of the soil most suitable for the cultivation of sugar-beet, and he added: Experience of practical results has led to the conclusion that the kind of soil best adapted to produce abundant crops of good quality is a light rich loam; but the best authorities appear to insist rather upon perfection in tillage, as securing a greater uniformity in the annual yield as well as quality in the crop, rather than upon adherence to any very marked character of soil. This perfection of tillage, combined with a soil of a loamy character, is to be seen in the neighbourhood of Magdeburg, in Germany, and it is there that the cultivation of the sugar-beet is most successfully and extensively conducted in relation to the production of sugar. I had the advantage of accompanying Mr. Duncan at this time last year through the sugar districts of Northern Germany, and by him my attention was constantly directed to this superiority of tillage. I had seen something of the same kind on former visit to the sugar districts of the north of France, but I am disposed to yield the palm, as it is generally claimed, to Germany. There is no room for difference of opinion as to whether France or Germany produces the richest sugar-beet, or obtains in the manufacture the highest result; there are

fiscal considerations, however, which influence in an important degree the operations of the two countries. Having shown that in Germany more than in France, the sugar manufacturers farmed largely for themselves, and advertising to the cultivation of the sugar-beet, he quoted Walkoff: "The bed of arable should be deep enough to allow of the plant penetrating far down and finding nourishment at the lowest point; consequently the ploughing often extends to a depth of 15 or 16 inches in those countries which give the greatest attention to this cultivation," and Mr. Porter argued that the more thoroughly the earth be broken up and filled, the more completely would the desired end be obtained in the development of the plant, and in the production of sugar. It was customary to give the first ploughing immediately after the corn harvest, in order to hasten the decomposition of the weeds and stubble, or other organic matters, which contributed to the sustenance of the succeeding crop. Towards the end of the autumn the deep ploughing he had mentioned commenced. Some gentlemen present were aware of the operations of Mr. Campbell, at Biscot Park, on the border of Berkshire: he, with very powerful steam machinery, penetrated and disturbed the subsoil at a depth of three feet from the surface. In some parts of Germany they did not give the third ploughing in the spring; but that is an omission hardly to be recommended, where, as is perhaps but too common, there were weeds to be got rid of. He (Mr. Porter) trusted the gentlemen present that evening would accept it as established by close observation on the part of men long practised in the cultivation of the root, and in the manufacture of its product, that a deep, well-wrought, clean, and permeable soil was of vital influence in the natural development of the plant, and in the quality of its juice. It could not be too forcibly impressed upon those who embark in the cultivation of the sugar-beet in connection with the production of sugar, that many very fertile soils, and many fertilizing matters, rich in elements conducive of great development of the plant, unfortunately imparted to its juices certain salts which operated in preventing the crystallization of the sugar in the process of manufacture. The foreign matters, so inimical to the economy of the sugar manufacture, were more abundant or more active in peaty soils, in pasture land newly broken up, and all soils newly manured; hence it was customary on the Continent, when contracting for a crop of sugar-beet, to insert a clause excluding roots grown upon land newly broken up from pasture, upon wet and marshy land, and in gardens; and preference is given to roots that have come from land that had been well manured for the preceding crop of wheat or rye, but that had received none afterwards. Commenting on the due proportions of manures and the precise period at which to apply them, he said, rich nitrogenous manures—such as farmyard manure, guano, &c.—should never be applied to land intended for the cultivation of beet immediately before sowing, but should either be applied with the previous crop or during the preceding autumn, or at least should be put on as a winter compost: cattle manure—farmyard manure—was in all countries chiefly employed. It contained nearly all the elements necessary for ordinary crops, and which those crops withdraw from the soil. All sugar manufacturers were unanimous that it would be better to sow the sugar-beet only in the second year of the manuring, when a first crop shall have consumed 50 or 60 per cent. of the manure, and have left in the soil a less concentrated solution of its elements. With beet-roots more feebly manured, purer juice is obtained, and accordingly a more complete elimination is arrived at of those matters which obstruct the crystallization of the sugar, and a better yield is attained. Practice has demonstrated that the dung of oxen and horses is preferable to that of pigs and sheep, the last containing a much stronger proportion of soda, which prevents the crystallization of sugar; at the same time they contain less phosphoric acid, an element favourable to the development of the root. Liquid excrements are very rich in elements, easily assimilated, and form excellent manures. A given weight of urine represents in useful effect five times its weight of farm-yard manure. Hence the manufacturers collect the urine by means of dust in ashes from the fuel: there is thus obtained an inodorous manure very good for sugar-beet cultivation. He showed that bones when ground up had a special value for the production of sugar-beet, and he said a great advantage was derived from mixing the bone-dust with the farm-yard manure or dung of the feeding stalls. Guano

also constituted a useful manure for the sugar-beet, as it could be employed with all kinds of soil, was easy of transport, and was sure in its effect. It was mixed in a moist state with earth, and thrown in a coating upon the land by hand. It had so much the more value, as it contained combinations of phosphates and ammonia—that was to say, had been more or less washed by rains. Its action was particularly marked in moist seasons, but it was very injurious to the seed; consequently, they should never be brought into contact; added to the other manures in the proportion of 200 kilos. per hectare, it gave very good crops; employed with bone-dust it was very good in sugar-beet cultivation. Oilcake was a manure of quick action, and was easy of transport. It should be ploughed in in the spring some days before sowing, and at a depth of 60 centimetres; for, placed in a fresh state in contact with the seed, it was prejudicial to its germination. It should be mentioned that the oilcake attracted insects upon the beet fields, and might thus bring about some depredations. Mixed with the crushed bones, it gave sugar-beet of excellent quality in a manufacturing sense. Ashes could hardly, properly speaking, be considered as a complete manure, for they consisted but of universal substances which alone could not furnish to the sugar-beet the necessary nutrition. Given in large quantities, they produced beetroots so charged with salts that the ulterior operations became very difficult. After speaking of lime, which he said often exercised a very salutary action, he came next to the seed. He said it is common in Germany, Belgium, and France to soak the seed for a day or two before using it. Water is not recommended for this purpose, as it withdraws from the seed its natural puriton and imparts nothing compensating. The liquid drainage of the farm-yard or manure heap, on the contrary, impregnates the seed with its fertilizing elements, and plants from seed thus treated are found to be remarkably stronger, and with a deep green foliage. The seed is also by this preparation kept moist by saline properties of the manure, and thus in part redeems the time that a natural fall of the seed from the mother plant would have operated in preparing it for germination. Solutions of guano and nitrate of potash have been employed for the same purpose with good effect. Mr. Porter further explained that in preparing the seed in this way after steeping it from 24 to 48 hours it should be kept moist for two or three days, laid on sacks or otherwise, in thin layers of about four inches, so as not to become unduly heated. Instead of steeping it, it might be laid out in thin layers and the liquid applied with a waterpot and rose. As to the period of sowing, a great deal depended upon the weather. April was the month, but whether early or late in that month could only be determined by the after-result, as affected by the character of the season. It was found last year in this neighbourhood that of the seed sown early in the month a large proportion ran to seed, unless repeatedly cut back; while in fields sown a fortnight later with the same seed very little of this was observed. For the secretion of sugar a long and steady growth was considered the best, but where late frosts and a chilling spring or cold, wet summer supervene, mischief is done that is greater with the earlier than with the later sown. Much was sown broadcast still in many parts of France and Germany; in others the seed was dropped by hand into holes or into the furrows traced for the purpose; but where the cultivator operated upon a large surface, he now very generally availed himself of such machines as we employed in England. The sowing was best in line, and at intervals of eighteen to twenty inches, while the spacing of the plants longitudinally should not exceed ten or eleven inches. If they were farther apart they would of course grow to a greater size individually, and possibly yield in the aggregate a heavier crop of roots for the farmer. But that is by no means, continued Mr. Porter, to be assumed. For myself I believe three plants at ten inches apart will, other things being equal, weigh more than one that is at a distance of thirty inches from its neighbour; and I think some of my hearers will acknowledge that in this respect they were agreeably surprised in their sugar-beet crops of last season. They had in most instances a "good plant"—in the sense of a few failures of seed and of a close growth of apparently and comparatively small roots; but the sugar-beet, when fairly attended to, shows but little above ground, and a crop of the kind I refer to is likely to deceive those who are more accustomed to the common beet or mangold. Numbers tell. With rows eighteen inches apart and plants at intervals

of ten inches you have 35,000 plants to the acre, and as you may find many plants so placed exceeding 2½ lbs. in weight, there should be a large margin for the many accidents which go to diminish uniformly, without falling short of an average of 1½ lbs., which would amount to 18½ tons to the acre. One gentleman has this past season sent in to Mr. Duncan's factory a somewhat larger average than that, over sixty acres, and in another instance four acres yielded 100 tons of roots, not averaging more than 2 lbs. per root; in the latter case I am told it was land newly broken up from pasture; still 25 tons per acre were grown, and, the roots being comparatively small, must have been thickly planted; and, being thickly planted, and thus comparatively small they would be comparatively rich in sugar, though having been grown upon new land the density of their juice was probably increased by salts of foreign matters. It was usual on the Continent to pay very special regard to the destruction of weeds, and as soon as the young plants were fairly seen above the ground the first hoeing took place. Great importance attached to the hoeing—so much so that there was a saying that "It is the hoe that makes the sugar." It was possible to overdo it; it should be well done in the earlier growth of the plant, but the third or last hoeing should not occur at so advanced a period as to risk injury to the leaves, nor indeed was it desirable unduly to stimulate and prolong the growth of these at the expense of the root, and in that case to the diminution of the sugar too. From the end of July or the early days of August the plant should be allowed to repose. The method adopted by some gentlemen here of moulding up to the roots with the plough is a very excellent substitute for the third hoeing by hand. I shall hope that it will be more generally followed, for it is of great service in the interests of the sugar manufacturer. I shall not be surprised to find the sugar-beet take the place of mangold as raw food for cattle, particularly within reach of a sugar factory; for it is a superior food, and should the farmer experience a season favourable for cattle food generally, he may find a market for his sugar-beet at the factory. I have said that the secretion of sugar in the juice of the plant is not active until the foliage is matured. By researches made in 1859 upon Bohemian sugar-beet there was found by Balling, in the juice of those taken up on the 29th of August, 9.13 per cent. of sugar; in others taken up on the 15th of September, 11 per cent.; and in others taken up on the 30th September, 13 per cent.; and in 100 roots tested by Bretschneider, in Germany, in 1860:

20th June	4.59 per cent.
9th August	5.15 "
31st "	7.81 "
15th September	9.17 "
30th "	11.81 "
16th October	11.90 "

Walkoff gives also as experiences of his own the results of experiments made in 1859 and in 1860, from which he shows that in the first year the roots drawn on the 29th July gave 9.41 per cent. of sugar, those on the 27th August 11.83 per cent., others on the 12th 14.17 per cent.; then abundant rains occurred, and the effect on the juice would appear to have been serious; for roots taken up on the 29th September gave no more than those of a month previous, viz., 11.83 per cent., not in itself a bad yield, but in comparison with 14.17 per cent. a falling off. In the second year of their growth while he found 11.83 per cent. of sugar on the 28th April, he found but 1 per cent. on the 20th June, when it may be assumed that the plants were running rapidly to seed. As a biennial plant, the sugar-beet, except under some peculiarities of the first season, produces its seed in the second year of its growth, during which second growth it would appear that the sugar it had secreted in the first year ministers to its nourishment and to that of its seed, for it diminishes and almost entirely disappears during the development of this last. From this it may be inferred that when in seasons like that we experienced last year, the plant under extraordinary conditions of the varying temperature and the moisture of the season throws out the seed-bearing stalk, it is at the expense of the sugar the root may have acquired, and as this shooting of the stalk occurs at a comparatively early stage of its growth before it can have had time to secrete any considerable store of sugar, it is not surprising that the ultimate yield of sugar proves, under such circumstances, to be much below the average. Accord-

ingly, while the weight of the sugar-beet received at the factory this last season was one-third greater than was received the year before; the amount of sugar extracted was but little in excess of that derived from the crop of 1870, and was inferior in quality. Some of our roots were taken up too early last season. It has been found on the Continent that the later the roots are taken up, so that it be not delayed so long as to incur the risk of encountering the early frosts, the better they will keep. On some parts of the Continent the women and children lay the newly-raised roots in a line, the heads all in one direction, and a skilful hand following with a sharp spade cuts off the leaves and crown; on the other hand they are as often cut with a knife. I should like to see the former plan tried here, particularly on roots that having been allowed to grow much above ground are coarse and large. These require a good deal of topping, and are heavy for women and children to hold in the one hand, and difficult to trim with the knife in the other. They present a sufficiently solid object to decapitate by means of the spade. Where the roots are more carefully grown and earthed up, the crown or base of the leaves is much smaller, and the trimming by means of the knife is less difficult, and there is less waste for the grower. The roots as they are trimmed should be placed in small heaps and covered with the leaves, unless they can be at once removed to the factory or the clamps. Care should be taken, in removing the soil that in heavy land adheres to the root, not to bruise or wound it. Those injuries, as they would in the case of an apple or pear, prevent the root keeping well—a matter of consequence if they were for cattle food, but of serious importance in view of the loss of sugar resulting from the fermentation induced, not in the injured roots alone, but by contagion also to those they are stored with. The cost of cultivating the sugar-beet in this country is by this time pretty well known to members of the Lavenham Farmers' Club from the experience of three or four seasons, and you are in possession of the figures of your Vice-President, Mr. Biddell, himself a grower to the extent of fifty or sixty acres. Mr. Biddell, putting together interest on capital, rent, tithe, and rates, has a total, under the head of

	£	s.	d.
Common charges, of	2	14	0
Horse tillage and drilling	2	5	0
Hand-hoeing and singling	0	12	6
Seed, 9lbs.	0	4	6
Taking up and topping	0	11	0
Filling and carting two miles, at 2s. per ton, on 15 tons	1	10	0
MANURES. £ s. d.			
10 loads farmyard	2	5	0
8 cwt. phosphate.....	0	16	6
1 cwt. guano.....	0	14	0
Labour to manures.....	0	2	6
	<u>3</u>	<u>18</u>	<u>0</u>

Making thus a total per acre of.....£11 15 0

For the roots delivered at the factory he receives £1 per ton, and he values the tops left on the field at 7s. I think Mr. Biddell's charge of 1s. per ton per mile for filling and carting to the factory is very ample, particularly if he can at all choose his own time for doing it. He is quite right to put down 10s. per ton as a normal interest upon capital, and I only remark upon it because in giving details of this kind it is sometimes left out of the account. Happily, Mr. Biddell's figures do not deter him and other gentlemen, his neighbours, from continuing the cultivation of the sugar-beet upon an undiminished scale. I have reason to hope from all I hear that their example will be followed by many others, and I trust that on the commencement of the next sugar season at the factory we shall have to congratulate them upon the abundance of their crops, and upon their having carefully cultivated the sugar beet in relation to the production of sugar.

Mr. R. HAWKINS confessed that he should much like to see a better return than they had at the present time for their efforts and enterprise in the growth of sugar-beet. He, for one, thought it would have been more remunerative than had been found to be the case; but he was determined not to give up the growing of the beet until he was absolutely compelled, hoping for better things in the future. As to the question of manurial preparation of the land, he had hoped that some special kind of manure might be named which would increase

the growth of sugar-beet, or which was specially adapted to that plant. But it was very well understood that what was wanted at the factory was beet, with a good deal of sugar in it, and farmers were, of course, quite ready to grow so as to get a large quantity of sugar if it could be shown that they got weight as well. If, therefore, a kind of manure could be hit upon which was calculated to produce a large amount of sugar as well as a weighty crop, farmers would gladly apply it in the most suitable form. As to the application of guano, it so happened that the very best crop of sugar-beet he ever grew was off a piece of land which had been manured in the autumn, and he put on $2\frac{1}{2}$ cwt. of guano per acre. The land was not ploughed deeply, and he not only got the best crop, but he also got the best beet. There was no doubt, however, but that deep cultivation and a good application of manure was the proper treatment for sugar-beet. As to the cost of cultivation, his opinion was that it could not be done under £10 per acre. Considering the trouble there was with regard to the labour, the difficulty connected with getting them singled out, cleaning them, and sending them to the factory, he felt sure that the cultivation could not be put down for less. He had tried the growth of the sugar-beet in comparison with the ordinary mangold, and he must confess the results had been marvellous. He had 20 tons per acre of sugar-beet, but he had 37 tons of the common beet. He could grow a far greater weight of common mangold per acre than he could of sugar-beet, for the simple reason that he could not get the roots of the latter of any size to command a great weight per acre. In conclusion, Mr. Hawkins expressed a hope that the next season might be of a character which would make the growers of sugar-beet a little more satisfied with the remuneration they received for the exertions they were obliged to make. There was no doubt but that if they could get a good crop it was a paying crop; but at the present prices of corn, sugar-beet had not perhaps paid so well as corn would have done. He much hoped that the factory which had been established at Lavenham might prove a success in a financial point of view, and he for one should be exceedingly glad to do all he could to enhance its prosperity. It was just possible that corn might not always realise the present figure, and then they, as farmers, might have cause to feel grateful that they had in their midst a factory for the manufacture of sugar.

Mr. W. VINCE, sen., spoke of the necessity which existed of there being a clear understanding as to which was the best manure for growing sugar-beet, so as to give the greatest weight and the greatest percentage of sugar, and he said he had no doubt that when they came to carefully peruse Mr. Porter's very excellent paper they would be able to learn something which would be of great use in that particular direction. He (Mr. Vince) never grew, as a general crop, thirty tons per acre.

The CHAIRMAN said he thought the quantity named by Mr. Hawkins was rather high.

Mr. HAWKINS said he did not grow, as a general rule, over fifteen tons of sugar-beet to the acre, and he grew over thirty tons of the other.

Mr. T. P. HITCHCOCK said he had been at considerable trouble to pick up information in reference to the growth of sugar-beet, and he had watched with interest, not only what had been done in that neighbourhood, but also abroad, and he confessed for his own part that he could not see why we could not in this country grow as good roots as were grown abroad. The growers in France and Germany had had the same difficulties to contend with in regard to adverse seasons as we had in England, but they had been able from some cause to overcome the difficulties to a greater extent than we had. There was surely some reason for this. He knew of a Prussian gentleman who bought an estate in Saxony, and he, like others, erected a factory, and, like many others, they grew the roots and made the sugar. Speaking one day to a friend on the subject of the speculation, he (Mr. Hitchcock) was reminded that there was 80 per cent. profit on the sugar. The profit on the sugar was no doubt the secret. He believed there must be something in this statement as to the profit on sugar or else Mr. Duncan would not have gone to the expense he had done in erecting the factory; it was no doubt a rich trade if a good quantity of roots were forthcoming. It seemed to him a most extraordinary thing why we in England could not make it answer our purpose to grow sugar-beet as well as in foreign countries. He could not understand how it was that people

were so slow in erecting factories in this country when it was being done to such a great extent in other countries. With regard to the operations at Buscot Park, the beet were grown there not only for sugar, but for distillation, and the park was cultivated very deeply by what was termed knifing. On the steam plough there were three knives which went a good depth into the soil, and he had no doubt it was possible to get a much deeper tillage on old grass soils than if the soil was poorer. As to the question of manuring, he had always been told that guano as well as farm-yard and other manures should be applied early, otherwise the soil was not enriched to the necessary extent. He thought they, as farmers, should endeavour to grow as many roots as possible. He considered that they would be able to do more under the new regulations than they had hitherto done. Their being allowed to clamp the roots, and he allowed for the clamping, was a great convenience, enabling them to bring the roots in later in the season when the horses were not so much required. This salutary alteration would no doubt tend to make a great difference in regard to the general growth of sugar-beet.

Mr. R. HAWKINS said the new regulation as to clamping would be found a great accommodation, while there was one matter to which he intended to have alluded, and that was as to the time the roots should be taken up. It had been remarked that October was a far better month than September. But, he thought that if the roots were early, and the leaves were seen to be getting yellow, and the roots were grown to a proper size, September was as good a month as any. And his experience had taught him that if the roots were well covered up in a straw, they did not require any earth over them whatever.

Mr. C. S. SCOTT said that a good deal must depend upon the season.

Mr. HAWKINS said the season did not matter. The roots would stand any season we had if they were well covered up with straw.

Mr. R. EDGAR feared he should be looked upon rather as an obstruction, for he did not see anything in the admirable paper which had been read to alter him in his first impression, and that was that the sugar manufacturers' interest and the growers' interest seemed to clash. Farmers naturally wanted to grow as much sugar-beet as they could, and if they applied those manures which were calculated to produce a large crop, then it did not seem to suit the manufacturers, because they said the large roots were deficient in sugar or that it was not that sort of sugar which would crystallize. It was not at all clear to him that the common roots did not possess sugar which, though it might not suit the manufacturer, was not quite as useful to the farmer. However, he only wished he could grow the right sort of sugar and 20 acres of it too. As to the soaking of the seed alluded to by Mr. Porter, he (Mr. Edgar) could not quite understand how it could be drilled if it were soaked in the manner described. It would be necessary to dry it first unless it was dibbled, and that process would be much too slow. The soaking of the seed might make the plant appear the sooner, but he did not think it had that effect upon the early growth that some imagined. In conclusion, Mr. Edgar said he would grow more roots as soon as he could see that it was more profitable. What he should like to see was that all in that neighbourhood should grow a certain proportion on their fallow shift; that would, he considered, be better than having two or three large growers.

The CHAIRMAN was inclined to agree with most of the views that Mr. Porter had advanced. There were, however, some with which he did not agree. In regard to green manure, it must not be forgotten that most of the roots were grown after a white straw crop. At the same time, if there was an early lot of peas and mustard or some other green plant put on and ploughed in, that no doubt would be a good preparation for the sugar-beet. His experience of green manure was rather favourable. He remembered when he tried it it came out very well, but, like a good many other people, he did not follow up that which was beneficial so closely as perhaps he ought to have done. Allusion had been made to the soaking of the seed. He remembered many years back making some experiments with turnip seed. He tried ordinary water by the side of various solutions, but in that he found there was but very little difference indeed. If, however, a preparation was made so as to break the husky fibre of the sugar-beet seed, it might possibly have the effect of enabling them to obtain a plant

seven or eight days earlier, which must sometimes be a benefit, so that he did not altogether despise that. Then as to the time of taking up beetroots, he could not help thinking that they were frequently a little too fast. He often found that his roots which had been taken up early did not weigh so well as he hoped, and, on the contrary, those that had been taken up late came to much more than he anticipated. Though the leaves of the plant might by their serenity indicate the termination of growth, yet there was no doubt but that the roots continued to swell. With reference to the profit of sugar-beet roots, it should not be forgotten that they had been introduced so far in times when both corn and meat were high. In regard to the yield of the sugar-beet in comparison with the common beet, he might say that he tried it side by side last year in different places, and he was surprised at the little difference there was. Mr. Hawkins had alluded to the great amount of labour there was connected with sugar-beet; but he (Mr. Biddell) never got money worth mentioning without some trouble. Profit was generally found to be the result of well-directed effort, according to the old proverb, "Without pains there are no gains," and, therefore, if it was a troublesome crop, it might be accordingly profitable. He was much struck with the remark as to those gentlemen who grew sugar-beet so largely. There was no doubt that they did not do it because they found it so very profitable to grow the root itself, but because the profit came afterwards in the manufacture into sugar, and, therefore, it was to be hoped that the growers of the roots in this locality might have a larger share in those profits. If the manufacturers gave the growers only 10 per cent. out of their profits, there was very little doubt but that the roots would be more extensively grown. He thanked Mr. Porter on behalf of the Club for his valuable paper.

Mr. R. HAWKINS said he had tried soaking the seed, and found that it was a good thing if you were sure of having some wet weather. The seed he wetted moulded after it was put into the ground, because the weather happened to turn out very dry. In regard to the clamping of sugar-beet, he might say he had made an experiment with a rod of beet. He cleaned them properly, laid them in a claupe, and covered them up,

and in one week it had wasted a stone, and that was a little more than five per cent.

Mr. EDGAR said that the beet would waste much more in the first week than it would afterwards, and the 2s. a ton extra would about make up for that loss.

Mr. PORTER replied. Mr. Hitchcock had asked why he should not grow sugar-beet as well here as abroad. He (Mr. Porter) could go further, and say he believed that we could grow it as well as they did in France. In Germany the manufacturers were as a rule also growers of their own sugar-beet, but he must think that the 80 per cent. profit named was, to say the least, a little overdrawn. He did not think he was betraying Mr. Duncan's interest greatly if he stated that last year had he the amount of sugar he had previously had, he would have made a handsome profit, but as it was he (Mr. Porter) did not think that there would be £100 on the right side of the books. At the same time Mr. Duncan had entered into the speculation, and at present had no misgivings, and it was to be hoped that the future would show that the speculation was a right one. As to the question of earthing up of the roots, he did not suppose that it had a very material effect as it regarded the weight of the root itself. This last year their roots were particularly well earthed up, and he did not think they lost any weight by care in that direction; on the contrary, he thought that perhaps they gained something, as otherwise there would have been a waste in trimming. In reference to the question of soaking, he knew that it was an operation much thought of where sugar beet was largely cultivated. There was a peculiarity about the sugar-beet seed which made the soaking process the more valuable. Mr. Porter explained the plan that was adopted abroad, so as to dry the seed and thus obviate the difficulty which had been made as to drilling; and, having commented on other points brought under the notice of the meeting, he said in conclusion he wished some plan could be devised by which the beet at Mr. Duncan's factory could be bought according to quality, and if that were so no doubt some would receive only 16s. per ton, whilst others would get 25s. It was, however, extremely difficult to know how that was to be done.

AGRICULTURAL POLITICS AND PRACTICE.

At the Botley Market dinner, the Right Hon. W. F. Cowper-Temple, M.P., said with regard to the owners of the land what he thought greatly to be desired was that land should become a more marketable commodity, and that some of the resolutions with regard to the disposal of some portions of the land should be reduced. It would be of immense advantage to a man who had saved a small sum of money if he could invest it in some portion of the land. This would be a great advantage to farmers particularly. He did not mean to say that they could buy large portions—but it would be of great advantage to the country at large if these men, who undertook the management of the land, and who were good practical farmers, would be able to invest what money they had in acquiring the fee simple of land, and thus revert to the old practices of former times, when many handy yeomen were found throughout the country, and when a man was not only farming the land, but he was also in the improved position of both farmer and landlord. Then with regard to the farmer he thought there should be such an arrangement of farm leases so that a man might be able to bring to bear the best modes of cultivation, and that he should be so secured that when he gave up the farm he should be fully and fairly compensated for those unexhausted improvements. He thought the farmer who was cultivating his land should be secured against any damage to his land by the existence of game on the estate, and which might be kept to excess by the caprices of some landlords, for they must bear in mind that it was not always that game came from the lands of those under whom they rented, but often from neighbouring property, and it was right, therefore, that a tenant should be secured from having his crops eaten up by hares and rabbits from those covers. Then with regard to the labourers they had the question mooted whether they obtained a fair share of the produce of the land to which some said they were entitled to. With reference to

the strikes among farm labourers he believed it would be a bad thing, because strikes meant the same rate of wages for all the workmen, whether they were idle or industrious. He believed it would be more beneficial if they could do as was done in some mines and in the manufacturing districts—take the workmen into a co-partnership. That was that the workmen should receive a minimum rate of wages per week, and that beyond this he should receive a bonus upon the result of his work—or the combined exertions of master and man. This bonus would be a rising or falling one according to the result. In a bad year, when there was not sufficient produce to have a bonus, there would be nothing, but in a good year there might be a considerable bonus, and in this way the labourer would feel that he was to some extent a partner with his employer, and therefore his efforts would be directed to the success of the undertaking. It would not only tend to produce more food, but the men would be improved as a class. Of course there might be some difficulty in applying this to farms, and he did not say that it could practically be done. But he might say it had met with very great success at one of the coalmines in Yorkshire, and in some of the manufactories as well, and he thought if they could guide the labourer in the right path, not by getting him to endeavour to improve his condition by means of strikes, but by putting him into partnership or an agency with the master, and to see whether the produce of the farm could not be improved, and as the improvement in a pecuniary point of view would depend upon the success of that in which they were engaged, and it would be a wonderful advantage for the working man if he felt he had a pecuniary interest in the work going on, and it would tend to make a man rise in his own estimation, and become a better member of society. The question of local taxation was one which was very closely connected with agriculture, and one in which they must feel a great interest. Parliament had

been working very hard this year, but he expected before the end of it they would have the six omnibuses Mr. Bright spoke about driving through Temple Bar at once stopping the way. He (Mr. Cowper-Temple) was afraid that no more new measures could be dealt with this year, and he anticipated they would be unable to deal with the important question of local taxation. It was a large matter, and involved many considerations, and until it was settled he thought Parliament should be very cautious indeed before they added any burdens to the local rates.

Lord HENRY SCOTT, M.P., said, as to the game question this was now gone to a committee of the House of Commons and no doubt they saw the discussion on it the other day in a bill brought in by Mr. Harcastle, one which the House felt it would be impossible to go into. The pains and penalties which he proposed to attach to it were found to be wrong in principle, and such as it would be impossible to carry out in practice. There were then four other bills on the game question before them. All these, with the exception of Mr. Harcastle's, were sent to a committee of the House, but they could not assent to the principle of Mr. Harcastle's, and therefore they were unable to send it before a committee. The effect of the whole debate was that the Home Secretary, on the part of the Government, consented to name a committee to go into the whole question. No doubt in that committee would be gentlemen who were well informed on the subject, in whom the farmers of England had great confidence, such, for instance, as Mr. Read and one or two other members, who he thought really represented the farmers, and who thought and spoke their wishes, and therefore the interest of the farmer would be carefully watched over in that committee. The great evil in the question was that it would necessarily occupy some time. They could not hope that any more new bills would be introduced this session, and at the end of it something might occur which would put off the questions which were before them now. He was afraid that they could not expect anything to be done just yet, and he thought it was quite impossible for any Bill to be brought forward on the subject for at least two years to come. The best thing they could do would be to get their opinions and their views brought before the committee, and he would recommend that they should select some of their most able men to go up and give their views before the committee. His belief was, and always had been, that do whatever they liked the Legislature would never get a settlement of the question unless they could get a concurrent opinion between landlord and tenant. Unless they could get the landlord and the tenant to agree to some common line of action all legislation would be a failure. What they wanted was to make an agreement between them whereby the tenant might be compensated, and that whoever made that agreement or broke through it should pay for it. This was a matter which affected the landlord as well as the tenant, for if a farm was overrun with game the landlord must suffer, because when that farm was unoccupied and was in the market he would not be able to obtain so much for it as otherwise. He did not mean to say, however, that there were not some men who would sacrifice a certain amount of rent for the sake of sport, but still he thought that an arrangement between the landlord and the tenant would be the only satisfactory solution of the difficulty. They might make an arrangement with regard to the farm, but there was the difficulty with respect to ground game in the woods. The great difficulty with reference to ground game was the keeping of it down in the woods. He was quite certain that the outlay on an estate was considerable for keeping down the ground game in the covers. Passing from this subject they came to that of the labourers. From what he had heard and knew of the wages paid in the north he really believed they did not pay their agricultural labourers in that part of the country in the way they ought to. When they came to consider that they only gave them 9s. per week—"Twelve"—well, some get 12s., but when they only had 9s. per week it certainly was too little. He quite agreed that every man should be paid according to his worth. He did not wish to pay a higher rate of wages where the work was not given. He thought they ought to consider this question, for he thought they would feel they were not doing what they ought to do with regard to their agricultural labourers. Whether they would be in a position to do that which his hon. friend had alluded to he much doubted, because there would be much difficulty in taking a man as a co-partner

in a farm, where losses soon arose from storms and that kind of thing. They all knew that a farming business fluctuated in accordance with the season, and they must bear in mind that he very much depended upon the weather and the sunshine being on his side. He could not command the seasons, and, although they might be possessed of money and other things, they were dependent above all upon the blessings which were showered down upon them from above. There would thus be a difficulty in taking the agricultural labourer into co-partnership. He would take the profits, but would he agree to or be able to bear the losses? Some people really did not know what the losses were on a farm in a bad season.

Mr. H. BONE said it was impossible for the farmers to pay their labourers more than they did at the present time. There was a great difference in the work of the mechanic and the agricultural labourer, and when the latter became decrepid and unfit for work, they had to be kept by the occupier of the land. He had seen the man with 30s. and 40s. per week in the manufacturing districts, but he was not so well off or so happy as the agricultural labourer with his 10s., 12s., or 13s. a-week and his cottage.

Lord HENRY SCOTT explained that he did not mean it to be understood that the wages were not sufficient in that part of the country, but in some parts, where the wages were 9s. per week, or less, it really was not sufficient. He did not wish to make any general charge against the agriculturists of the country, but, where they were 9s., that it was not quite enough; and he agreed with Mr. Bone that a labourer in the country with a good cottage and garden was much better off than the mechanic in many of the large provincial towns. What he asked them to consider was whether 9s. per week as wages was not too low.

Mr. WARNER, the chairman, said that 9s. was quite sure the rule and he would not say 10s. or 11s. He was wane note, if they took the general average throughout Hampshire, it would be 12s. per week.

Mr. C. MILWARD, Q.C., believed by sending their young men out of the country for a time, to India, they would see more of the world, and would come back less a "clod-hopper," with minds of their own, and if they had well trained men, who were accustomed to discipline, they would be able to do more work and in a better style than they would without that training. (Mr. J. STUBBS: They will be fit for nothing.) He would not send them out for fourteen or fifteen years, and send them back at thirty-four or thirty-five years of age, when they were practically good for nothing. If they took them away at nineteen, and brought them back at twenty-five, he thought they would be useful and manageable men. They did not find their Volunteers a bit the worse as workmen because of their drill. (Mr. STUBBS: Yes, but you never get much out of a Militiaman.) He never found anyone who would do too much. With regard to the transfer of land, that it might be made as easy as the transfer of stock or shares in a company, all that was wanted was for a register to be kept, the same as was done in a company.

CANCERINE.—There is a very small portion of the coast of the little State of New Jersey, U.S., not far from Cape May, which is infested during the months of May and June, and at no other season of the year, by swarms of huge crabs, about the size of a large soup-plate, and about the ugliest creature in creation, be the next what it will. Its flesh is too coarse and strong for food, and its *raison d'être* has, until the last few years, not been very apparent. A "happy thought," however, struck a gentleman who was strolling on the beach, wondering, perhaps, for what purpose these animals were created; that, although not good for food themselves, they might become a cause of food if applied to the land, for he observed that the shell was not of a calcareous nature, like the common crab, the lobster, &c., but was *horny*, and therefore probably contained a large quantity of ammonia, which, as everyone knows, is a most material element in manure. Having satisfied himself upon this point, the next step was to secure so large a share of the profits of his discovery as would repay him for putting up machinery. This he had no great difficulty in doing, for, like a wise man, he kept his idea to himself; and as no one had ever conceived that there could be any possible value attaching to these great, ugly, crawling things, he secured for a very small sum the sole right of pick-

ing them off some two miles of beach, or bought the beach itself, I am not sure which. He then set up a crushing-mill, and employed people to collect the crabs, which are speared and thrown into waggons, just as our agricultural labourers pick up turnips to throw into the turnip-cutter; and they lie about as thick as turnips in a field. They are literally in myriads. They are then thrown together in heaps, the base of each heap being surrounded with hurdles to prevent their escape. Here they die a slow and cruel death from suffocation, much as the pearl oysters in Ceylon do, and it will be easily imagined that they do not emit a very agreeable odour in the process, though they do not putrefy so much as one would expect, but rather dry up, thereby losing about four-fifths of their living weight, or rather less. They are then thrown into the crusher and torn to pieces, but not being dry enough to grind, they are further kila-dried, after which they are reduced to powder. That powder is "cancerine," which is worth £6 a ton at the mill, and is in great demand amongst the fruit-growers in Maryland and Pennsylvania. Last year about 400 tons of it were made, and considering that the crab-harvest only lasts two months, and that their visit is confined to so small a portion of the coast, this will show how numerous the creatures are. As to their eggs, one may almost say that the sand of the beach is eggs; and there is a story of a ship captain, who was unacquainted with the peculiar character of the beach, loading his vessel with what he supposed to be some

particularly nice clean sand. On the voyage the eggs were hatched, and on arriving at his destination he found that he had a live cargo to deliver, which the port authorities declined to receive, and ordered the ship out to sea, to the poor man's great consternation. One would have supposed that the same shrewdness which detected a possible value in what others had passed unnoticed would also have recognised the importance of carefully husbanding the supply of raw material for his novel manufacture, but the story of the goose that laid golden eggs is one that finds a wide application. No sooner was Esparto grass found to have a value for paper-making than the greedy but lazy owners tore it up by the roots, in their eagerness to make a present gain, thereby destroying a permanent source of income. The same thing happens with these crabs. Not only is the voracious crushing mill destroying the parent crabs by the million, but the eggs, which should be carefully cultivated, are scooped up by the bushel and thrown to the pigs and poultry. Looking to the great and increasing value which our high-pressure scientific farming gives to everything that tends to renew the exhausted producing power of the soil, it is a point worthy of the notice of our scientific men whether we cannot find on the rocks and beaches of our own coasts the means of carrying out the hint which New Jersey has given us. In a densely-populated country like ours there certainly ought not to be any waste, either of food or of food-making material.—*The Food Journal*.

THE MIDLAND FARMERS' CLUB.

THE LABOUR QUESTION.

A general meeting of the members was held at the Royal Hotel, Birmingham, on the first Thursday in April. Diener was provided at three o'clock. The Chair was taken by the President of the Club, Mr. J. Bowen Jones, but there was only a small attendance. The subject for discussion was "The Present Aspect of the Labour Question."

Mr. LYTHERALL read the following letter: Elford Park, April. Dear sir,—I very much regret that a badly-sprained ankle hinders me from attending the Club to-day. The subject for discussion is always interesting, but necessarily so just now. I am not at all surprised that a movement for an advance of wages has taken place in some counties. How a difference of 30 or 40 per cent. in wages ever obtained seems a mystery almost as great as a family of six or seven people trying to live on 10s. a week. Peculiarity of locality, of markets, or of population, cannot account for the discrepancy. Railways are everywhere, and the best articles of food are saleable at good prices everywhere—besides, a man with brains, legs, and will need not be rooted to one spot like a tree. However, the fact remains that wages vary from 10s. to 16s. a week in adjoining counties. If the average cost of labour per acre were about 25s., one-third reduction in this gives a benefit of 16s. a year to the employer of cheap labour. Perhaps "cheap and nasty" is synonymous with "cheap and dear." Be this as it may, one thing is certain—that on all well-cultivated farms the limit of labour is reached, and if wages rise beyond a remunerative point, either farms will be worse handled, or rents must fall. I now employ fifteen men, paying 15s. a week, and an advance of 1s. a week at Lady-Day, giving one man notice, in order to keep within limit. Many well-intentioned, but ignorant speakers and writers, put farm labour on the same platform with factory or contract labour. This is a great mistake; only a small part of it can be gauged or measured. The major part is changeable, desultory, and often wasteful, requiring personal and constant supervision, subject to all the interruptions of the weather and widely-dispersed efforts. One cannot ring the bell and open the gate at work and meal hours when acres of ground separate your forces. All men ought to be willing to pay a fair day's wage for a fair day's work. But in order, as a rule, to obtain the latter, we need, I fear, a higher standard of morals. Wages will not make men virtuous, and while beer is more attractive than duty the case seems hopeless. I sincerely hope that in any general scheme or arrangement for the improvement and com-

fort of the labourer (and both are needed), beer and cider will be sternly ignored, and whatever wages are given will be in money. Cottages on the farm—say, half an acre of garden ground to each—and either new or skim-milk supplied at a moderate price by the farmer, are absolute necessities. Every landlord should be compelled to supply the former, and every tenant the latter. Probably if the man felt at home on the farm, and the wife saw her children better cared for, fed, and taught, a joint interest might obtain, and a pleasanter answer be returned to any remonstrance than a week's notice to quit. —GEORGE A. MAY.

The CHAIRMAN said they had met that afternoon to discuss a subject which incidentally bore upon a question which had been very much before the public recently—a question of very great importance to all classes of the community, and one which he trusted would be discussed impartially that afternoon. He might say, from what he had seen and read, that in his opinion the question had been discussed in the newspapers in a way which was not altogether satisfactory. Many mis-statements had appeared. It was a subject which was not generally understood. He might mention that the condition of the agricultural labourer, with especial reference to cottage accommodation and education, was the subject which was discussed at their meeting in June, and therefore he would recommend speakers to adhere to the subject in the agenda—viz., the present aspect of the labour question.

Mr. G. WISE said he had been asked to introduce this subject for discussion, and he did so with very great pleasure. He wished to speak upon it with all fairness to the agricultural labourers; but in the papers he saw statements made concerning the tenant-farmers and the landowners of South Warwickshire which he knew were not truthful. He should, therefore, try and prevent the public mind from crediting much which had been said with respect to the farmers and landowners of that part of the county. He would show before he had done speaking why the county of Warwick had been chosen for this agitation, though the wages in it were higher than in many parts. Several gentlemen, whose names he would not mention, had been very much abused at the meetings which had been held. The speakers described these gentlemen to be oppressors; but the fact was they were amongst the most benevolent men that England could produce. They were gentlemen who went through the cottages of their labourers with a view of doing all they could to better the

condition of their labourers. Mr. Arch, of Barford, in one of his speeches, said that Mr. Galton had dismissed the son of one of his cottagers to make room for a stranger; but this was incorrect. Mr. Galton told him that he had a good cottage occupied by an old man, his wife, a lad of eighteen, and a lodger, who worked for him. The son had never left him. He (Mr. Wise) had the pleasure of a very large acquaintance with the tenant-farmers of South Warwickshire, and he could most truthfully say that, so far from being oppressors of labourers, they were ever foremost in every good work in their different parishes. There were many things in connection with the farming interest which the people who had got up this agitation entirely lost sight of. He thought they would agree with him that during the last four or five years very little had been gained by those engaged in farming. The price of corn was low, disease had carried away a great quantity of cattle, and though the price of beef and mutton was high, the first cost of the animals took off a great quantity of the profit. Again, labour was increased very much in price. He thought, at a rough guess, land now cost 5s. per acre more in labour alone than it did. This showed that the prosperity of the farmer was not quite so great as some suppose. He would remind those who had taken up the question that there was a great difference between agricultural labourers and those employed in factories. If there was a want of work in the factories the men had to go elsewhere. It was so in other cases. Did the farmer do this? No. He kept on his men all the year, though there were many times when he was not able to find them work for more than three days in the week, and yet the men were paid in full, as if they had been hard at work. He was afraid that this fact had been forgotten. A farmer in Yorkshire, in a daily organ which had had a great deal to do with this organisation, had soundly rated the farmers of South Warwickshire for not paying their labourers enough; but he would show that the labourers in that part of the county had not been so badly paid as had been represented. No one wished to see the labourers in a better position than he did. He had always advocated their claims when an opportunity occurred; but he thought they were to blame for not having, in a conciliatory spirit, asked their employers for an increase in their wages. If they had done so, he believed the increase would have been granted long before the strike began. He had a most excellent table of the wages of the agricultural labourers in the Tysoe district. It had been prepared by a clergyman, and it was as follows:

Particulars of the average income of an able-bodied agricultural labourer, with wife and five small children, one only old enough to work, and the wife able to work 12 weeks out of the 52.		£	s.	d.
Man—for 45 weeks, at 12s.	27	0	0	
" Harvest, four weeks, at £1... ..	4	0	0	
" Beer money	1	0	0	
" Hay time, mowing, three weeks... ..	3	3	0	
" Beer money	0	9	0	
Wife—Reaping, two weeks	1	4	0	
" Beer, 4½d. a day	0	4	6	
" Haymaking, three weeks	0	18	0	
" Beer, 2½d. a day	0	3	9	
" Bean-setting, or other field work, five weeks	1	5	0	
Boy—45 weeks, at 2s. 6d.	5	12	6	
" Harvest, four weeks	1	0	0	
" Haymaking, three weeks	0	9	0	
" Beer for hay and harvest	0	3	9	
" If carter or cowman 2s. per week more, or 1s. and beer	5	4	0	
	£51	16	6	

Parish Privileges.

Allotments 30 poles (produce of half will pay rent &c., 15s. of the whole), thirty bushels of potatoes grown on the other half, at 2s. 6d.	3	15	0
Gleaning four bushels of wheat, at 7s.	1	8	0
" two bushels of beans and barley, at 5s.	0	10	0
Poor land, coal to the value of	0	7	6
Parish land, clothing, ditto	0	10	0
Adult clothing club, ditto	0	4	6
Children's ditto, ditto	0	6	0

£7 1 0

Without Privileges.

Average earnings of day labourer's family per week	£0	17	11
" " of carter or cowman's ditto ...	0	19	11

With Privileges.

Average income of day labourer's family per week	1	0	7½
" " of carter or cowman's ditto... ..	1	2	7½

As to privileges, perhaps, they would not agree about that. He was trustee for a charity, and, in an inquiry before the Charity Commissioners, one of the Commissioners said he thought one of the greatest misfortunes to a town was for it to have a multiplicity of "doles." The same remark applied to their agricultural parishes. A good deal which was untrue had gone forth to the world. On Saturday he ascertained that in the savings' banks at Warwick 75 per cent. of the depositors were agricultural labourers. He had received a letter from a farmer at Alcester, in which he stated that he had offered 15s. per week to labourers, and 18s. to shepherds, without any perquisites, but the men preferred to remain at their old wages. The men could not serve two masters, and this they would soon find out if they joined the union. A labourer would find that he had a master in the union most exacting in his demands. South Warwickshire had been chosen for this agitation because there were large towns in it, and trades unionists could interfere. He would counsel them to be firm, but also to be conciliatory where a proper spirit was shown. He should always like to soothe rather than to exasperate, and to show to the labourers that their true friends were the owners and the occupiers of the soil.

Mr. BRAWN said the demand for a rise of wages by the labourers was only what might have been reasonably expected, and to some labourers it was not only desirable, but must be conceded. He would, however, remind them that the British farmer and the manufacturer stood in different positions. The iron and coal-masters, if they raised the wages of their men, could raise the price of coal and iron. They found that immediately the strike took place the union was formed, and one of the principal agitators was the Hon. Auberon Herbert, who said, whatever happened, the labourers ought to stick fast to the union. He thought the hon. member's remarks were likely to create mischief. He made a mistake, and it was not the first he had made. He (Mr. Brawn) held that the Agricultural Labourers' Union was a calamity which must be measured by the extent of the union. He also held that if they ever had a national agricultural union they could not regard it otherwise than as a national calamity. They were told that the land they cultivated was capable of producing at least one-third more food for man than it at present produced. There was some truth in that statement. They were told again that they must break up their inferior turf land, and convert it into tillage, and that they must employ more labour and more capital. Now, he held the opinion very strongly that there was nothing which would tend to throw land out of cultivation sooner than a union of farm labourers. It would perhaps aid his argument when he said that they were in full recollection of the disasters which occurred to a great many of them last harvest, for want of sufficient labour to secure their crops. It would likewise be within the recollection of many of them that they had great losses in connection with their corn harvest, but in the immediate vicinity of Birmingham, where the very largest crops of potatoes were grown, to meet the requirements of the town and district, hundreds of acres of potatoes were totally destroyed—at least destroyed to the extent of three-fourths of the crop—for want of labourers at the labour season. Did they believe, could they believe, that the farmers of the district would invest in an expensive crop like the potato crop—for the potato crop required an expenditure which would satisfy even Mr. Mechi himself—in the face of an agricultural union and an agricultural strike, with an executive managing that union which might dictate to him at any time what he should pay or whether he should have labour or not? It was seldom he (the speaker) stood up before any company in the shape of a prophet, but he would venture to prophesy that enough had been done already to prevent the usual quantity of potatoes being planted in this district. The result might be proved in six months from that time, and they would see whether he was a correct prophet or not.

They would have to adopt this course, not as a defensive weapon to combat the union, but as a shield to protect themselves from the fiery darts which the executive of that union might hurl upon them. It was not with the farmers as it was with the manufacturers. A strike among farm labourers meant nothing else than a destruction of the farmers' hopes. At the meeting to which he had referred, presided over by Mr. Auberou Herbert, a letter was read which was signed by some half-dozen of "Dixon, Mundella, and Co." In that letter they found that the establishment of the union was approved of, and the union was spoken of as a stepping-stone to political power. They also got this remarkable sentence: "One of the most effectual means of improving your position will be the passing of a general measure of compulsory education. You will thereby avoid the possibility of the labour of your children being the means of under-selling your own." Now, he believed that the most intelligent among their farm-labourers with a large family suffering from that peculiar churn-like sensation which had been so effectually disturbed by "our special correspondent," would fail to see the force of that argument, as he had to count something made by his family of children up to the age of 13, who were supposed to be, and who were stated to be, completely ignorant, but who were to be compelled to attend school up to that age, so that they should not compete with him in the labour market. He scarcely liked to close his remarks without making reference to that powerful engine for good or evil—the Press. A great deal had been said and written in their public papers, and it had vauntingly been put forward that the eyes of the agricultural labourer had been opened by the cheap press. He said, in response, by all means let his eyes be opened, let him see, let him hear, let him read all which could be adduced for or against him upon the subject; but there was one thing the farmers were entitled to ask, and that was, that those who spoke or wrote upon the subject should make themselves acquainted with the question first. Mr. Smith told the farm-labourer that, with the present prices of beef or mutton, the farmer could afford to pay his labourer 3s. 6d. a-day. He (the speaker) would perhaps tax Mr. Smith's credulity considerably when he told him that if he would trace the fat ox from its birth to the slaughter-house, through two or three years of trying and unproductive weather; through one, two, or three years of disease, till he arrived at the slaughter-house, he would find that there remained no profit whatever to the farmer who had fed him. He should tax Mr. Smith's credulity still further when he told him that for three years out of the last four, the tenant-farmer had in a vast majority of cases paid his labourer not out of his profits, but out of his capital. Was it, he asked, to the interest of the labourer to hold up to ridicule the little acts of kindness which masters or masters' families might from time to time have shown. He professed no acquaintance with the soup in which the spoon stood upright, he possessed no knowledge whatever of the suit of clothes for the boy, or the little frock for the girl with which the author of "Ginx's Baby" had made himself so thoroughly acquainted; but one thing he knew, and that was, that for days, weeks, and even months, during the recent inclement winter, the tenant-farmer had supported his labourer, although his work had been of no appreciable value. He knew that the British farmer had paid for labour uncomplainingly, and with a certain degree of satisfaction. He would ask the Executive of the Union how they would meet that part of the case; would they insist that farmers should keep the same number of hands in winter as in summer, and pay the same wages? He was saying that to the men also, who demanded as the maximum of labour in summer ten hours, and would ask them how they were going to secure to the farmers the ten hours in the winter? They had been told that the farmers' agricultural societies were merely institutions to give them power to crush the agricultural labourer. They had given prizes to labourers for long service, and it was pleasing to find that an old labourer stayed long with the old master; but he put it to the meeting whether it was not as often the kindness and forbearance of the master which held that labourer to his post as the qualifications of the labourer as a servant. These were points for consideration, which he put before the meeting as a Farmers' Club, and which he put before those philanthropists who had their hands in their purses for any good work, but who, he believed, in this case, were exercising misguided phi-

lanthropy. He asked them to consider all the bearings of the case, and if they must put their hands in their purses, he would ask them to do so in aiding the labourer to migrate to those parts of the country where he could obtain remunerative wages.

Mr. WILLIAM FOWLER said he would admit his conviction that in some parts of the country the agricultural labourer was, as a rule, paid upon too low a scale, and he had long felt that he should be glad, by every legitimate means, to take a part in bringing about a better state of things; but he was firmly convinced that if the horrible system of unions and strikes, which had worked so much mischief, were instituted in the rural districts, it would be a most serious and grievous misfortune. They wanted no Odgers, nor Potters, nor Bradlaughs, nor Dilkes, nor peripatetic demagogues to interfere with the good feeling which existed in the agricultural parts of the country. The labouring classes there were a happy and contented and well-conditioned class of men, and they owed that happiness in a great measure to the good feeling which had almost from time immemorial existed between them and their employers. Although farm labourers' wages might nominally be regulated according to a low scale, they had many privileges which labourers in the town had not. Mr. Fowler expressed the hope that every one would do his best to ameliorate the condition of the agricultural labourer, to remove anything unjust of which he had to complain; but he hoped they would set their faces against the wicked attempt on the part of political agitators to introduce their cursed manoeuvres in the agricultural districts. He concluded by moving the following resolution: "That this meeting desires by every legitimate means to ameliorate the condition of the agricultural labourer; but will by any and every means, resist the interference of designing political agitators, who seek, for their own selfish purposes, to sow dissension between the employers and employed in the agricultural districts of the Midland Counties."

Mr. KING (Castle Bromwich) seconded the proposition.

Mr. A. RYLAND proposed the following amendment: "That with the view of promoting a better understanding between farmers and labourers a committee of this Club be requested to use their exertions to bring about a conference between properly appointed representatives of the landowners and farmers and the labourers." He thought that if anything could tend to give strength and determination to those who were promoting the formation of labourers' unions, the resolution moved by Mr. Fowler would have that effect. This was a question which deeply moved every one. There was not one in the country, whether farmer, landowner, or labourer, who was not deeply concerned in the question then before the meeting. It had been generally admitted that some change was desirable with reference to the wages of labourers; and, inasmuch as they admitted that this was a question for consideration, he thought it was very unjust—to say nothing more—he would rather say it was very unjust, to condemn the motives of those who differed from them in opinion. In every agitation there would be persons rising to the surface who took part in that agitation probably from unworthy motives, but he thought they ought not to impugn the motives of those who disagreed with them in opinion, however great the difference in political opinions might be. It was impossible to misunderstand the resolution which was before the meeting—it applied to those gentlemen who, not having farm labourers, perhaps having connection with the county, were taking an active part in the movement; and he urged them not to stigmatise the meeting with having charged them with stirring up mischief. By doing that they would not only be doing an injustice to their Club, but would advance the object they condemned. Suppose they admitted, then, that their explanation was deserving of consideration. They must not go to positive expression of opinion that all who differed from them, or the majority of the Club, were wrong. Would it not be better that they should promote some conference between the different parties who were interested in the matter? Those parties were three in number—landowners, tenant-farmers, and the labourers. They all believed that strikes were a great evil, and they ought to do everything they could to prevent strikes. He, perhaps, might be in the minority in thinking that unions properly constituted and managed would check strikes; but he thought they ought to meet those of opposite opinions in conference—the arbitrators being men of minds beyond any doubt

as to motives, quietly sitting round the table, so that the labourers might hear what the farmers had to say, and *vice versa*. The result of that conference, or succession of conferences would probably be that each one would find himself a little wrong, and that the right and proper thing would probably be arrived at, and they should hear no more of strikes. He hoped they would seriously consider the wisdom of passing such a resolution, for the resolution moved by Mr. Fowler would do mischief rather than good.

Mr. T. B. WRIGHT seconded the amendment. He was thoroughly convinced that the question could not be exhausted at one sitting, and he hoped that later in the evening some gentleman would propose an adjournment for a fortnight or longer. A great deal had been said about the blue books, with reference to the condition of agricultural labourers, but he certainly thought sufficient information respecting the movement which had brought them together was before the public to have induced the Legislature, and farmers, and landowners to endeavour to effect some changes. He regretted that there had been a strike of labourers in South Warwickshire, and said he preferred the course taken by the Hereford men. He thought the blue-books showed plainly enough that something had been necessary for many years. He quite agreed with previous speakers that these movements which they had witnessed of late were very likely to some extent, and unavoidably, to break up the kind feeling which had existed between farmers and their labourers, and that he should as much regret as any gentleman at that table. They must, however, come back to the point, that the land did not employ its fair share of its population, and the first consequence of that was that the population of the agricultural districts was forced into the towns. In a period of great commercial prosperity they might be wanted, but they had such things as commercial crises in their town, and he was afraid there was one coming on now, and what, he asked, would be the position of the labourers in this country then?

Mr. H. WIGGIN, in supporting the amendment, said he was sorry to differ from his old friend, Mr. Fowler, and, if he did not know that his bark was worse than his bite, when he read that gentleman's speech in the papers, he (Mr. Wiggin) should have thought him a hard-hearted, intolerant, bigoted man, whereas a better-natured man, or a better neighbour than Mr. Fowler, never existed. He (Mr. Wiggin) was therefore surprised to find him moving a resolution so sweeping in its character. It appeared to him that if the present strike of labourers in South Warwickshire was successful, the movement would spread throughout the length and breadth of the land. It was well, therefore, to consider and discuss the best and wisest way in which the demands of the agricultural labourers could be met. For some time past he had formed the opinion that, as a rule, agricultural labourers had been considerably underpaid, and he thought it would be to the interest of the farmers themselves if they would only adopt the custom of paying a higher scale of wages in money, and not in kind. Higher wages would tend to keep amongst them a better and more skilled class of workmen. The higher rate paid in towns than in the country attracted to the former the best class of men, whom it ought to be to their interests to retain on the farms. Another evil was the mode in which farm labourers were paid—by the giving of an enormous quantity of beer. If farmers would do away with that system, and pay the men in money instead of kind, there would be less sympathy amongst outsiders, who could not possibly know so much about this question as the agriculturists themselves. Although a farm labourer apparently received very small wages, namely, 12s. or 13s. a-week, yet, when the beer, the bacon, and other perquisites were added, the sum would amount to 14s. or 15s. a-week. For himself, he held it to be a vicious principle to pay men in beer. In his own manufactory he employed men taken from the plough-tail, and, while they worked there, they were quite contented and satisfied, but directly he sent them on his farm there was a demand for beer. His advice to farmers was—Do away with the system of giving beer, and pay in money. Although he was as strongly opposed to the formation of the union as Mr. Fowler or any gentleman present, still, at the same time, he was bound to say that he fully admitted the perfect right of the agricultural labourers to combine and form a union as much as the farmer or any other class of tradesmen. He believed it would be a great misfortune to a labourer if he became

a member of a union, as he believed it would tend to destroy that kindly feeling and good fellowship which existed between the employer and the employed in agricultural districts. In cases of sickness, the farmer or his wife and children made the soup and jelly for the sufferer, and, in ninety-nine cases out of a hundred, the employer and his family were always ready to lend a helping hand. There were exceptions, but, as a rule, the British agriculturists were as kind-hearted a set of men as any in the world. He (Mr. Wiggin) was therefore anxious to retain, if possible, that kindly feeling which existed between the employer and the employed, and the gain to the labourer in maintaining that feeling would be greater than he would receive by connecting himself with a union. Thus, in the interest of the labourers themselves, he objected to the formation of a union, and he should look upon the destruction of the present intimate relations between the farmers and their men as a national calamity. In many districts, as a rule, the agricultural labourer had been very unfairly remunerated for his work, and the time had arrived when they must look at that fact. During the last twenty or twenty-five years the wages of all classes of workpeople had considerably increased, and it was due to the labourer that he should also have an increase of wages. Still, no one could carry on business year after year at a loss, and the farmer must therefore be recouped his additional outlay for labour by an increased price for his produce. They might depend upon it that by giving their labourers a fair remuneration they would ultimately be recouped by the consumer for the increased expense. A letter recently appeared in one of the papers suggesting that the landlords should reduce their rents, so as to meet the increased demand for wages on the part of the labourer; but he (Mr. Wiggin) would ask the writer whether, when the employés of a railway or any other company demanded an advance of wages, whereby the dividends would probably be reduced, the directors would not, as had been done before, increase their charges. Therefore, if the labourers were better paid, the public must pay more for the produce sold. One of his reasons for objecting to the formation of the union was because it was un-English for the labourer to be regulated by a secret, or a sort of Jesuitical, society, about which nobody knew anything, and which ordered the men to strike on a certain day for certain wages, without giving the employer an opportunity of consulting them, and saying he was prepared to meet them. He should, however, vote for the amendment, because he desired to bring about a remedy in a more conciliatory way than the resolution proposed, while it would have a better effect than Mr. Fowler's "warmer" motion.

Mr. J. HARDY, M.P., said he attended the meeting as one of the representatives of South Warwickshire, and naturally he took a deep interest in what concerned so many of his friends and supporters—and he did not only mean supporters, but all the tenant-farmers and landowners in that division of the county. He agreed with many of the observations which had been made, and they must all allow that it was a very large subject that they were discussing, a subject into which six committees had inquired, and upon which blue books had been written. No doubt there were great hardships, and particularly as to the employment of woman and children, but, perhaps, those hardships existed less in the county where this crusade had originated than in many other parts of England. From the descriptions which he had read in the blue books, he should say that they existed especially in the south-western and eastern counties. He should deprecate nothing more than that there should be any disagreement in the Club. He was glad to see an admixture of town and country. He knew no better farmers than those connected with the town, for they always had something wherewith to help out the country, and that was a very great point. They did not feel all the vicissitudes of the seasons and the times, as the perfectly rural tenant did. He thought they were all agreed upon one thing, that they objected more especially to unions and strikes being introduced into the agricultural districts, where they had never been known or heard of, and, seeing what strikes brought about in towns, he did not wonder at gentlemen putting the resolution in as strong language as possible, in order to express their feelings. The labourers or artisans in towns differed so much from the labourers in the rural districts, that they could hardly compare the two; and the manufactures of the town and the productions of the country also widely differed. As had been said, if the price of labour in the towns rose, imme-

diately the price of the products rose, but this could not take place in regard to farm products, because farmers had to compete with the whole world, and as railroads were multiplied land steamships to the colonies became more numerous, the competition which the farmer was subjected to would increase; though in regard to corn, the competition could not be much more severe. It had been said that meat was high in price, and out of the reach of the working population, except those living near the towns, who got a chance to buy the coarse bits, because there was a great demand for the better joints. But he did not see that there was any chance of remedying that by a considerable rise of wages. Bread, of which the labourers consumed a great deal, had not been of an average price lately. They were all agreed that in many parts of England the agricultural labourer was underpaid and perhaps underfed, and that he might do more work if he were better fed; and no doubt there was a strong feeling that labourers had much better have their wages in cash, and not have allowances; and that certainly was his own feeling, except on very particular occasions, when they worked long hours. ("No exceptions.") Well, no exception, if they liked; but still, if people went on working by moonlight in harvest time, they might want something beyond their common day food. Some persons said the water-drinker might in the long run beat the beer-drinker (No, no). He had never tried it himself; but still one would not grade a man a glass or two of beer when he had shown one a favour by working long hours. He hoped these disagreements in South Warwickshire would be brought to some happy conclusion. Both parties seemed to be in a reasonable state of mind. No doubt the labourer did make a large demand—he did not know at whose instigation. It was a great rise, four or five shillings. It seemed to the world, merely reading the account in the papers, that there was a good case, but when they heard two or three facts brought forward by Mr. Wise, it seemed that with the allowances the wages of labourers, instead of being 12s. or 13s. a week, got up to 17s. or 18s.; and that altered the case a great deal. It was a pity these things could not be known to the world at large. They had not met to throw a slur on any particular district of the Midland Counties, which certainly might compare favourably with many other districts in England; and Mr. Auberon Herbert, who was a sort of Don Quixote, taking up everything to get a little notoriety, had better have begun in his own county, Hampshire, where, and in the neighbouring counties, he would find that the wages were at a lower rate than in Warwickshire or the Midland Counties. He always found that where coal was at the lowest price, agricultural labour was at the highest price, as the men had two ways of getting a living. He would suggest that the two resolutions should be united. He did not wouder at the backs of the farmers of South Warwickshire being set up a little when persons interfered between them and their workmen, and strikes and unions were introduced where there was no occasion for them, because if anybody in the county to whom the people might look up had been appointed as arbitrator, the question might have been settled as the colliers' question was settled in Staffordshire last year, when Lord Lichfield and others were appointed to settle the dispute between the masters and the colliers. By giving way a little on either side, he believed they effected a compromise at last, and the same thing might have been done in South Warwickshire. No doubt people were annoyed by this sudden inroad into what the newspapers pleasantly called Arcadia. Mr. Mechi had said that the pastoral age was over, and that there was nothing to be got by grass compared with what was produced by arable land; but near him (Mr. Hardy) people were gradually growing grass, instead of ploughing up, on account of the threatened high rate of wages. They could not be surprised at the present strike, if the agricultural labourers had got a hint from somebody else that in every part of the country there had been a rise of wages; but it would be much better for arrangements to be made between masters and men, or between some persons appointed as arbitrators, as everybody seemed to be in a propitiatory mood. Strikes and unions altered the whole state of things, for they must then hire a man for not less than six months, with three months' notice, or everything would go to pieces. He must express his sorrow for the farmers in their present circumstances, and hoped the meeting would come to a unanimous decision, as it would then go forth to the world that they had treated the

subject as it deserved. In his opinion this was only the beginning of the end of the agricultural labour question.

Mr. LOWE then moved the adjournment of the debate.

Mr. LINDSEY seconded the motion, but it was rejected.

Mr. HORLEY said there was no farmer in South Warwickshire, or in any other county, who would not wish to see the position of the agricultural labourer improved wherever that was possible, but many persons had been endeavouring to make themselves prominent in this question who were no friends of the labourers. No one more deprecated a strike or unionism, or would more strongly set his face against both, than himself; but he was sorry that he could not support Mr. Fowler's resolution, because the labourers might turn the tables upon the employers and say, "You are doing pretty much the same thing as ourselves." He should, therefore, like to take a different position to that assumed by the people who had been instrumental in endeavouring to carry on the strike and to form the union. He was a large employer, and he intended to set his face entirely against the movement. He had always found it desirable to pay the best men the highest wages he could possibly afford to give—and he thought the wages in South Warwickshire would compare favourably with those given in other parts of England, though there were, of course, exceptions. The time had arrived when farmers should do away with all privileges. Let a direct money payment be made, and if farmers liked to compensate their men for working longer hours, let them do so, but let there be no demand upon them. Let the men understand that if they worked unfair and unreasonable hours they would be compensated. With regard to the nine hours movement, as applied to agriculture, if carried out, he positively asserted that the man would suffer and not the farmer. In the winter months, if they were ever so willing, they could not work more than seven hours a day, and there was no "timekeeping" in agriculture as in other branches of labour. After an experience of many years, he assured the Club that no man was better paid for the amount of labour he performed than the agricultural labourer in many parts of England. He believed the labourer lived longer with the amount of work he had to do than if he had £1 a week to live upon. He was sorry that the demand for an increase of wages had not been made in the usual way, by the men going to the masters and reasoning and arguing with them, instead of sending notice that unless a certain rate was paid all round they would cease to work. The question must be regulated by the law of supply and demand. Had it not been for the people who, from the best, but in his opinion from mistaken motives had interested themselves in this matter, it would have been settled long ago. The Club ought to take a high position; but although he would generally condemn the principle, yet he would not pass too strong a resolution. He thought they would be wise in accepting Mr. Ryland's amendment, and seeing what a conference would do. He was sure he only spoke the sentiments of the great bulk of the tenant farmers when he said they were quite willing to pay the men the utmost they could afford. Before the agitation commenced many farmers had given notice of their intention to increase the wages of the men. He (Mr. Horley) defied anyone to prove that for some time past the men had earned so little as 16s. a week.

Mr. BREWSTER said he thought it was very important that men should be paid in coin, and not in kind. If that principle had been carried out years ago, he was satisfied they would not have had to meet that day to discuss the subject. If farmers would only consider the amount they paid in perquisites, they would find that it was something considerable. He had written to several large farmers, and from the replies he had received he found they paid two-thirds in coin and one-third in kind. In cash and kind they paid altogether a guinea a week. Many persons disputed that. It was disputed by many farmers in his own immediate neighbourhood. About a month ago the labourers residing in Shropshire were advocating an increase of wages; the farmers mustered themselves to discuss the subject. There were farmers present representing upwards of 6,000 acres of land in the immediate neighbourhood, but they could come to no satisfactory conclusion as to what increase of wages should be given, owing to the variety in the amount which each paid to his men in the shape of perquisites. He thought it should go forth to the public from that meeting that what they advocated amongst agriculturists was to dispense with perquisites and pay in cash. He could not

agree with some of the remarks of Mr. Wiggin, who had said that this was not a tenants' question but a landlords' question, and that if the farmers increased their wages they would have to fall back upon the landlords.

Mr. WIGGIN explained that he did not say so, but he simply quoted from a letter which appeared in a newspaper, and endeavoured to show that it was a gross mistake.

Mr. BREWSTER begged pardon, and said he did not agree with what was stated in the letter. They were not competing with the producers on that small island, but with the whole world; therefore it was impossible for agriculturists to increase the value of their produce. He might state that he had been a farmer in Shropshire seven years, and had always paid his men entirely in cash and not in kind.

Mr. WIGGIN said that in confirmation of the remarks of the previous speaker, he might mention that within the last ten days he advertised in the three Birmingham newspapers for a waggoneer, offering 18s. a week, and £2 additional for harvesting. He had only four applications. One man came to him from Tachbrook and asked whether there was a cottage. He (Mr. Wiggin) told him there was not, and the man refused his offer, telling him that he was getting 14s. a week, and considered that that, with a cottage and perquisites, was as good as the 18s.

Mr. LYNTHALL said there were farmers in the room who were paying 21s. to 25s. per week in cash.

Mr. FOWLER wished Mr. Ryland to withdraw his amendment, as he thought it would be better passed afterwards, as a corollary to the resolution.

Mr. LOWE expressed himself in favour of the amendment, but forbore to make a speech owing to the lateness of the hour. The PRESIDENT said he would put it to the meeting whether they thought it was the function of that club, as representative

of a considerable body of farmers in Warwickshire, to assume the position of conferring with any body of men chosen to meet them. In the first place, they had to ask themselves what was to be the composition of the body of men whom they proposed to meet. If they deprecated union, and appointed a deputation to treat with the labourers, they could only treat with the unionists.

Mr. RYLAND said his amendment did not deprecate the union.

Mr. FOWLER said he supposed Mr. Ryland intended that the labourers' representatives should be labourers, and not advocates.

Mr. RYLAND said he could lay down no conditions: that must be left to the committee.

The PRESIDENT said he would not speak on the general subject further than to say, that he did not think the agricultural labourer was worse paid than the ordinary town labourer. He complained strongly that the press in criticising the question in many instances argued from a one-sided point of view. Why had they not made a comparison between the agricultural and town districts? It would have been interesting to have known how much editors paid their printers' devils, and the little urchins who were employed in selling their penny sensational papers in the streets. He did not think that they (the farmers) had been well treated. The agricultural labourer appeared to him to be in as good a position as the unskilled workman in any part of the country.

The amendment was put and lost by 12 votes to 8. On the original resolution being put, 9 hands were held up for it and 9 against. The duty therefore devolved upon the President of giving the casting vote. He desired to modify the resolution, but several members said it could not be altered; and after a pause he said, "Then I vote for the resolution."

The meeting then broke up.

SUSSEX CLAY AND BELGIAN SAND.

Admiral Williams, of Silverhill, some short time since, gave a lecture at Hastings on "Sussex Clay, and how to mend it." He said: I have ventured to bring before you a subject familiar to us all; a matter with which each has daily something to do; a material which is the staple that secures us food, clothing, and shelter. This inestimable—ofttimes too little valued, nay, too often grumbled at—is the Sussex clay, the land around us, the land we live in. Perhaps those who have seen the Sussex clay in all its native strength—in its sloppy, sticky, miry dress of the winter season—will scarcely blame me for regarding it but coldly when I was first introduced to it, five years ago; for I had come from that light, rich, friable soil of Surrey, where, with scarcely any other tool than your own hands, the garden will yield most abundant crops. I walked round the grounds of my new house, and found it was terribly mis-named in its title of *Silver-hill*. I tried to move about the earth with my walking-stick, and with my foot, but quite in vain. "Why, it will take two years to get this land in order," I said to a friend who was with me. "Two years," he answered; "it will take much longer than that, I can tell you." I found no scarcity of *cold-water* friends to damp a poor fellow's energies. For my encouragement I remembered the accounts of farming work in Belgium, where the wide-spreading *Campina* districts, originally consisting of nothing but marsh and sand, by persevering industry, was brought into the most luxuriant cultivation. The people first planted gorse and broom plants, which drew moisture from the air, and deposited their leaves upon the ground. Upon this beginning, of a kind of sediment of vegetable earth, they planted fir-trees; and the falling of the leaves and bark in time made a soil. Birds began to build their nests in the tree branches, cattle began to find shelter and pasture. Then came the application of liquid refuse so common in Belgium, and, ere many years, the dreary, sandy desert gave place to the waving corn and the smiling grass; and beauty and fertility reigned in place of desolation and barrenness. What the Belgians can do with sand, thought I, an Englishman can surely equal with stiff clay. So I carted in load after load of dressing turf, sea sand from the beach, and silver sand from the hill side, and, best of all, ashes and street sweepings from the friendly town of Hastings. All these are tossed and dug into the clay, "terrifying it," as you say locally, in all

directions. This went on for a couple of years, and things did not mend much. I was reminded of that famous Chat Moss, upon which Stephenson laid his first railway, and into which thousands of faggots were cast; the more cast in, the more insatiable did that devouring Moss seem to become. It occurred to him to try lime as a last resort. And here I am reminded how often we have nearly gained our object, how frequently the battle is just won, when we are inclined to turn back, to give up in despair, forgetting the poet's lesson,

What makes the hero truly great

Is never to despair!

Well, the time was the turning point in the work. We put it on without stint. All was sweetened and loosened; and the strong, tough heart of the Sussex clay crumbled into dust! And then

What flowers blew!

What vegetables grew!

What fruit was borne!

How the cows lay down in the thick, high grass; so thick and high as almost to hide them! And how we cut and carved, and sent nose-gays to our gardenless friends! And the more we cut, the more we grew and bloomed. There was no limit to the beauty and the plenty, for in agriculture, as in all else, the truth holds, "There is that scattereth, but yet increaseth!" The lecturer alluded to the law of compensation, and spoke to the effects of draining on the Sussex clay. He next glanced at the value of that soil for brick-making, for the ornamental wares manufactured at Cadboro' Pottery (Rye), and as a chief ingredient in some of our best earthenware. From clay he passed to sand and glass, and thus spoke of West Sussex: To be convinced that glass is a material most conducive to comfort in civilized life, let any of my hearers visit the fine Saxon keep of Arundel Castle. The form is this: an outer and an inner circular wall, something like our Martello towers, the inner being the highest, from which the roofing slopes to the outer wall. The inner circle is open to the sky, whence the light crept in through openings below, and which were closed with wood in cold and stormy weather. And this was King Alfred's castle! Fancy the dreariness and darkness of this royal residence in the tenth century, and contrast it with the light, with the manifold advantages of every cottage, even in this century. And all this is from the mixture of sand with a cognate material.

THE ENTAILMENT OF LAND.

"There is a very large class of landowners or of persons standing in the relation of landowners, who are by law incapacitated from binding themselves and successors to remunerate their tenants at the termination of the tenancy for temporary, durable, or permanent improvements. I should think two-thirds of the lands of England are so settled, and the landlords so situated with respect to property, as to be unable to give facilities for improvement, however willing they may be." So said, perhaps the highest authority on the land laws of this country, about a quarter of a century or so since; and Mr. W. Fowler has just brought on a motion in the House of Commons, to the effect that the present state of the law as to the entail and strict settlement of land discouraged the investment of capital in the development of agriculture. Mr. H. R. Brand, who seconded this motion, said: "This was a subject upon which he felt very strongly, for he thought that the present law prevented the development of agriculture;" and Mr. Sewell Read, who supported it, said: "Not less than 8,000,000 of capital was employed only in the cultivation of arable land that was entirely at the mercy of the landlords, and subject to a six months' notice to quit. All they wanted was compensation for unexhausted improvements." Mr. Dent, again, "went entirely with the motion, for he believed that the present state of the law as to the entail and strict settlement of land discouraged the investment of capital in the development of agriculture;" while, according to Mr. Wren Hoskyns, "A life-owner now had no interest in registering the fee simple; he was merely an annuitant. Let him have absolute power over the land, and be trusted as the commercial community were trusted, and they would see a very different investment of capital in the soil, and they would no longer hear complaints of landlords for not doing that which under the present system they could not be expected to do." Here, at any rate, according to the best men, there was something to go on, with an agricultural question at last really before the House. And what came of it? We can well imagine the Chambers of Agriculture, "whose duty it is to look to measures before Parliament," carefully whipping up their representatives, so as at least to present a good front on the occasion. Not a bit of it! Before Mr. Fowler had delivered himself of half-a-dozen sentences, an attempt was made to count out the House, and the evident design was to let the thing drop through. Just as the great body of members of either side carefully stay away when a Game Bill is coming on, or a proposal to repeal the Malt-tax, or any other absurd and so-called agricultural grievance. Mr. Gladstone was no more in earnest than Mr. Disraeli, who adroitly changed the subject to the condition of the labourer.

In plain truth there never was a more discursive discussion, nor one less worthy of the occasion; a bad example being set at the very opening of the debate, which other speakers were not slow to follow. Had there been no strike in Warwickshire the probability is that we should have heard little or nothing from Mr. Fowler as to the labourer's cottage. But some men possess an unhappy facility of introducing anything as *appropos* to anything else; who would associate vote by ballot with the utilization of town sewage, and contrive to advocate in the same breath the abolition of church rates and the use of chievery. The consideration of the law of entail was conducted much after this fashion, a majority of those who did speak so managing as to

either keep very wide of the question, or so as to arrive at no very consequential conclusion. We have said, for instance, that Mr. Sewell Read supported the motion, and if Mr. Stewart's opinions have still any weight, Mr. Read's arguments ask for some alteration in the way in which land is settled, although he voted for perpetuating the present system. This vote does not sound so satisfactorily, as it reads more like the follow-my-leader of some old county member than the act and deed of a tenant-farmer's own representative. There is at this moment scarcely an agricultural association of any standing but which has declared against the needless difficulties which oppose the transfer of land and the evils which result from the mania for hampering and tying up landed estates. Men thus come to occupy a position, the duties of which they are unable to fulfil, and their inability is gradually reflected on other classes.

There are people, no doubt, who are as much misers in land as others are in money; they hoard up all they can, as they would take this away with them if they could:—

"I give and I devise," old Euclio said,

And sighed, "my lands and tenements to Ned."

"Your money, sir?"—"My money, sir, what all?"

Why— if I must," then wept, "I give it Paul."

"The manor, sir?"—"The manor! hold!" he cried;

"Not that, I cannot part with that"—and died.

And so they scheme that their treasure shall be kept together intact as long as possible. Just as the one counts his gold coin by coin does the other tell over his lands acre by acre. Neither has much thought of the good to which such possessions might be turned, the ruling passion being only to accumulate more and more. Against this pernicious habit the legislature has from time to time been compelled to interfere, as in regulating the extent to which a property may be entailed, and no question but that some further reform in this direction is necessary. The wretch who sacrifices everything for riches is himself the chief sufferer; the man whose greed is for land often injures others equally with himself. He is, in his need, a burden and incumbrance, "impoverishing that which it is not in his power to fertilize." There can be no question but that much of the improvement in the agriculture of this kingdom depends on the terms upon which estates are held; and large mortgaged properties retained in families for the mere pride and name of the thing must be to the national disadvantage. We have had a terrible illustration of this in the history of Ireland.

It is clear, however, that nobody thinks much about any such growing an evil in England. The Government, as usual, got over the business as it does everything now-a-days, "as well as it could;" and the county members and Farmers' Friends clearly thought it very bad taste to mention such a matter. Colonel Barttelot, Colonel Brise, Colonel Corbett, Sir Michael Beach, Mr. Beach, and Mr. Sewell Read are all for keeping things as they are, despite "the family lawyer, with his mortgages, settlements, and entails." Sir George Jenkinson, Sir Massey Lopes, Mr. Pell, and other Chamber lights made no sign; while Mr. Dent Dent, Mr. Wren Hoskyns, Mr. James Howard, and Mr. A. Johnston really seem to think that the art of Agriculture might be made to develop itself more satisfactorily were we to amend "the

present state of the law as to the entail and strict settlement of land."

HOUSE OF COMMONS.—TUESDAY, APRIL 9.

Mr. W. FOWLER rose to move "That in the opinion of this House the present state of the law as to the entail and strict settlement of land discouraged the investment of capital in the development of agriculture, to the great injury of all classes of the people, and increased the complication of titles, and the expense and delay incident to the transfer of real estate." The hon. gentleman expressed his regret to see so thin a House when so large and so difficult a question was to be considered as that to which his notice referred. The subject, in his mind, presented itself especially in two aspects arising out of the admitted defects of the land interest in this country. In the first place, there was the defect in the production of the soil; in the next place, there was a defect in the social condition of the people. Although it might in one sense be said that our system of agriculture was in many respects superior to that of the continent of Europe, still that superiority was after all but relative. The question really was whether our condition was in itself satisfactory? Within the last six months they had had the testimony of two great authorities—namely, Lord Leicester and Lord Derby—on this matter. Lord Leicester, addressing the people of Norfolk in October last, said he came to the conclusion that the amount of the production of the soil of this country was not more than one-half what it ought to be; and about six weeks previously Lord Derby expressed a similar opinion. Now what did that calculation mean? It meant a loss of £200,000,000 a year; that was to say, there was an annual deficiency amounting in value to three times the whole taxation of the country (Hear, hear). There was no cure but one for this evil, and that cure was, as Lord Derby said, the introduction of much more capital into the cultivation of the soil. Well, who was to find that capital? He said that both the landlord and the tenant ought to find it.

[Here an ineffectual attempt was made to count out the House.]

The hon. gentleman having resumed, proceeded to observe upon the state of the law which permitted a landlord to run over a tenant who had laid out a considerable capital upon his land without compensation. It appeared to him that the principle of compensation should be established by Act of Parliament. But what were the special hindrances to the application of the owner's capital in the cultivation of the land? They were three. First, the law kept the land forcibly in the hands of impoverished owners, who had not the power, even if they wished, to sell their estates or any portion of them. Secondly, a large part of the country was held by limited owners, who were tenants for life. Thirdly, the complications of title existed to such a great degree, that it was impossible for persons of moderate capital to incur the tremendous cost attendant upon the transfer or conveyance of real estate (Hear, hear). There was a very large area of the land locked up by strict settlement. Lord Derby, alluding to this part of the question, said that there was always plenty of land for sale in the market. But if that were the case, was it not a remarkable fact that the price given for it was so high that it seemed to show the demand had overtaken the supply? (Hear, hear). Land in this country was treated too much as a luxury and too little as a means of investment. Although he had no objection to great estates, he certainly did object to a system which, by the natural power of the law, kept the land from coming into the market in such quantities as to invite the investment of capital (Hear, hear). The system of strict settlement, maintained for generation after generation, had resulted in the greater part of the land being held by men who were virtually tenants for life. The life ownership of an estate could not be reckoned at more than half the value of a fee-simple, and no encouragement was held out to the owner to spend money on his estate. On the contrary, every discouragement was given him to abstain from so investing his capital. He was unable to borrow money for the purpose, except at a great sacrifice. If he had improved his estate he could not in his will give any directions as to how the money thus spent should be distributed after his death. It must go, under the settlement, to the next heir, who was generally already the best provided for, and the one who

took the largest benefit under the will. He might be an idiot or a lunatic—he might be a bankrupt or a disgrace to the family—but the settlement could not be altered. Under such circumstances, it was obvious that the owner of the estate was under no temptation to put his money in it, but, on the contrary, to take all the money he could out of it; in point of fact, the law of settlement made him rather the manager of his property than the proprietor of it. The effect of such a law was to introduce needless and innumerable family complications, and it had also most disastrous consequences in regard to the community at large—upon the homes of the agricultural labourers, and on the condition of the labouring classes generally, its traces were but too clearly visible. Upon the first point, no doubt could exist. The evidence on the subject was overwhelming, and no one could deny that the state of the agricultural cottages of England was a national disgrace. The House was bound to remove, at least, all legal obstacle to a better state of things. Last year, when the subject was under discussion, the argument of the Solicitor-General was, that better cottages were not built because it did not pay to build them. Well, no doubt new cottages did not, at present, pay directly, but even now they were, indirectly, no bad investment for a proprietor to make; and if they did not pay directly it was because the labourer could not afford to pay a sufficient rent, which was because his wages were too low, and his wages were too low because the capital in the hands of the proprietor did not allow of his paying better ones, and the capital was deficient because the law of settlement discouraged the investment of capital in the land (Hear, hear). A mass of evidence existed in reference to the disgraceful state of the cottages of agricultural labourers, but he would not weary the House by repeating it. Quite recently the correspondence in the newspapers had shown that things were fully as bad now as they had ever been. Buckinghamshire cottages had been described which were totally unfit for habitation, and the Bishop of Manchester, whose experience extended over three hundred parishes in Norfolk, Sussex, Essex, and Gloucestershire, had declared that in only two of them were the cottages in a satisfactory condition, and that the moral, physical, economical, and intellectual ill-consequences were such as could hardly be exaggerated—that they were "fearful to contemplate," and that the only wonder was that among persons residing in such filthy homes any sense of decency or modesty was to be found at all. Mr. Currie, who was a practical agriculturist, and who had travelled over England and Scotland, as a special commissioner, had borne the same evidence, and had also pointed out that nine out of every ten of the owners of estates had tried to do their duty in building proper cottages, but that the thing was impossible, especially in the case of burdened estates, and that the very attempt had often occasioned almost as much suffering to the landowner as to the poor labourers on the estate. The question was, what was the cause of this disgraceful state of things, and how was it to be remedied? The house had shown its sense of the necessity of some interference, because it had passed an act authorising the borrowing of money for the purpose—but at the prohibitive interest of £7 4s. per cent. It might be said that the evil was one that would adjust itself in the course of time, but it had now been in existence for a very long period, during which England had been lending her money to swindlers all over the world, and yet this evil had shown no sign of abatement (Hear, hear). Again, it was maintained that, even if proper cottages were built for the agricultural labourers they would spoil and misuse them; but he replied that the degraded habits of a lifetime were not to be immediately removed, and that the first and most indispensable step towards the inculcation of better habits was the providing better homes (Hear, hear). He had not said, nor did he mean to say, a word against the large estates, because he knew very well that on some of the largest of them were to be found the best cottages; but what he wanted was to see a state of the law which should encourage on all estates, whether big or small, proper provision for the decent lodging of the labourers. In regard to the other branch of the subject—the condition of the agricultural labourers generally—the conclusion of the most competent authorities was that, so far from having improved, it had retrograded during the last 50 years, especially when compared with the enormous increase in the wealth of the country and the great rise in the wages of mechanics. If it was true—as a great authority had stated—that the earnings of the agricultural labourer were now 15 per cent. in excess of what they

were thirty or forty years ago, it must be remembered, on the other hand, how much the price of meat and other articles had risen in the same period. He thought that during recent discussions a great deal that was unjust had been said against the farmers. One great broad result of the commissioners' reports showed conclusively that where wages were highest the farming was the best. Northumberland even, with its inferior soil and climate, was a notable proof of this, as in no country was agriculture more flourishing, as in none was the labourer better educated, better fed, and better able to work. Another general fact was that the north country labourer was much superior in intelligence, and capacity, and emolument, to his brethren in the south, and the cause of this was mainly to be found in the fact that in the one case agriculture was carried on with ample capital, whereas in the other it was not; and the consequence was there was not an adequate amount of wage-fund. The other day the hon. member for Oldham stated that he did not like strikes, but he did sympathise with the unfortunate agricultural labourer, for in his official capacity he was continually being asked to allow the boards of guardians to give relief to families where the wages were 9s. a week, and he was compelled to refuse the applications, because if they were granted there would never be an increase of wages. Here, too, it appeared that where the wages were lowest the poor rates were highest, and *vice versa*. In fact, the scale of wages over the whole county was insufficient, except in those neighbourhoods where there was a great demand for other kinds of labour. He knew no remedy for this state of things—certainly none that the house could supply—except by removing all obstacles to the flow of capital into cultivation. It was said that education would improve the condition of the labourer, but money must be forthcoming to produce that desirable result, and that money could not be obtained without a considerable change in the law. It was a melancholy fact that the rural population had decreased and was decreasing. He found that out of 26,000,000 of population in Russia there were 5,000,000 of persons directly interested in the land as small proprietors; whilst in the country, with a population of 32,000,000 there were only 2,000,000 employed on the land, and there were only about 400,000 proprietors. He believed it would be a great conservative proceeding if they could bring about a change in the law which would give a much larger number of persons a personal interest in the land (Hear, hear). It was quite clear that the prevention of the land being dispersed, the employment of persons on the land was prevented. It might be asked what he proposed to do—how did he propose to meet the difficulty—what sort of ownership did he recommend? No man was further from being a revolutionist than himself. All he asked was that there should be more freedom in regard to the soil, that Nature should have her way, and that the land should not be trammelled by our fantastic laws. He would have such a law that each generation should take care of itself, and that there should be no settlements, and that an end should be put to tenancies for life—that each generation should take the land and deal with it and use it as it might be best. It was said that if that were the law the land would not be sought for as the means of founding a family, but he did not believe in that assertion. It had been asked, "How about the peerage?" He would say, let the peerage take care of itself, and that if the peers did not take care of their families they were not fit to review the decisions of that house. It had been said that his proposition was calculated to tear up the land, as in the case of France, and grind it to dust in the hands of small owners. But he did not propose to do anything of that kind. He had heard the complaint that he wished to limit the power of settling land and not personal estate. But the two things were very different. Whether he or any other person had a sum in Consols or railway stock made no difference to any one of the community; but as regarded land it made all the difference in the world, whether a rich man or a poor man held it. It was said that his plan would limit the power of the owner; but his answer was that instead of so doing it would increase that power. He would only limit the power of a man dying or dead, but not of a living man. No doubt there was great difference of opinion with regard to what he had said; but in the few words with which he should conclude he did not think there would be much difference of opinion. He referred to the present system of titles to and transfers of estates. As long ago as 1857 a commission reported that the present law was objectionable and

could not be worse, and yet nothing was done until 1862, and then what was done was by another commission, in 1870, reported to be useless. They might leave the whole question of settlement as it was, or they might vary the whole question of transfer. At the Bank of England stocks might be readily transferred, and why should not land be registered and be rendered easily transferable? Why should you not transfer land with the same facility that you transfer stock? It was only prejudice that prevented this, for it was done upon the Continent. This drawback affected small holders as well as large holders. He knew the case of a man who sold to a poor man, for the benefit of the latter, a small estate, but it was upon condition that the poor man should bear the expense of the transfer, which was disproportionately large. At Hamburg mortgages were bought and sold just as bills of exchange passed on the Exchange in London. This was a question which interested all classes. It interested the landlord because it would put him in a more natural position with reference to his property and to his family. It would improve the position of the occupier of the soil. It would also improve the position of those miserable men who tilled the soil, and who lived in houses in some of which they should not think of putting their cattle. Though the process might be slow, it would improve the condition of multitudes, and would, in the end, command general approval (Hear, hear).

Mr. H. R. BRAND, in seconding the motion, said this was a subject on which he felt very strongly, but he thought that the present law prevented the development of agriculture. Certain events which had taken place of late had made this a question of great importance—he alluded to the attempts of the labouring classes in Warwickshire to raise their condition. He thought that what had happened showed the necessity of raising such increased produce from the soil as would enable the cultivators to give the labourers better wages. If the hon. gentleman had contented himself with bringing sweeping charges against the landlords he (Mr. H. R. Brand) should not have given him his support. There might be great difference of opinion as to the nature and extent of the remedy, but he did not believe that there would be any difference of opinion if hon. members would consider the report relating to the condition of men, women, and children employed in agriculture. The necessity of a change would be manifest to those who had considered this document. One evil arose from the discouragement which existed to the employment of capital on the land. The tenant-farmer had not sufficient security for his capital (Hear, hear). They had been placed in possession of the views of the Earl of Leicester on this question, when he stated that a tenant should have a lease, or the equivalent of a lease. Permanent improvements were those which were most difficult to effect. He had intended to bring forward a question relating to the advisability of giving facilities to small owners to raise money, but he came to the conclusion that the landlords were at the bottom of the whole act, and he thought he should be beginning at the wrong end, and that it would be better to give the landlord further powers of sale. They might be employed for several sessions in carrying a sanitary legislation. He could only say that if hon. gentlemen were not convinced by what they had seen of late, he would direct their attention to what had been stated by the Bishop of Manchester with reference to the condition of the cottages in Norfolk, Essex, Suffolk, and another county, the description being severally that the condition was miserable, deplorable, detestable, and disgraceful. In other cases it was said that there was need of improvement. Another gentleman stated that the cottages in Dorsetshire were worse than in any county he had visited, except Shropshire. No doubt these were the worst cases, but they needed a remedy. Elsewhere, no doubt, the case was often different, and, in many cases, the landlords had provided proper abodes, but when cottages had been erected by mere speculators there was often very wide room for improvement. The commissioners, while acknowledging the good service that had been done by many landlords, stated that in many dwellings the common decencies of life could not be observed. Some persons said that agricultural labourers would rather live in a hovel than in a decent house, but that he denied. In conversations which he had had with many farmers in his own neighbourhood, he had always heard them say that, as a last resource, wherever cottage property was necessary on their farms they would be quite willing to give their landlords 4 per cent. interest on the erections. Among various erroneous state-

ments which had been made in connection with this subject it had been said that all these improvements could be made under the present law, because the landlord or limited owner could give a lease to a rich and wealthy occupier who would make the necessary improvements. But from his acquaintance with farmers he did not think there would be many of them who would be such fools as to invest their capital in permanent improvements unless they got ample security for it, and if they got ample security for erecting the improvements they would in point of fact become the real owners themselves. Then it was said that the landlords, speaking generally, were not willing to give leases to their tenants, as they wished to keep the power and influence belonging to the property in their own hands, but it would be an absurd thing, even with leases, to expect the tenant to erect permanent improvements. It was also said that there was a power of sale and of settlement, and that was true, but everything depended on the form of the settlement, and if there was nothing in it to prohibit the owner from exercising the power of sale, he could exercise the power unquestionably, but then he had to reinvest the capital which he derived from the sale in land again, so that by exercising the power of sale he really would not get the command of any capital to employ in improvements. Another statement made was that a limited owner could borrow money under the provisions of an act of parliament; but on what terms would he get the money? He would have to pay five per cent. interest under the act to the company of whom he borrowed, and then he would have to pay back the principle in yearly instalments extending over 25 years. For every cottage costing £120 the landlord would have to pay over £7 a-year for 25 years, and as at the outside he would only get back from the labourer £4 or £5 a-year, he would be at a deal loss of £2 or £3 a-year at least. The only way of settling the question was to restrict settlements within proper bounds. He thought it would be very unwise to continue the present system, which allowed people to live on land which they could not improve or do justice to—it was a system that had been endured so long because it tended to keep old properties intact, and to keep up old families. But the old families in this country did not require to be kept up by artificial means, and the members of those families had no desire to be dependent on anything else than their own exertions and the exercise of their own virtues, and he would therefore ask whether the well-being of the people was to be sacrificed merely for a fancied notion of keeping up the aristocracy of the country? The evil that existed at present was a very grievous one, and it was an evil which had been the growth of years. The landlords had tried remedies—they had done a great work, and were willing to do more, but they could not remedy the evil entirely, and the only way in which Parliament could assist them and extricate them from the difficulty in which they were placed was by restricting settlements, and making those landlords the real owners of their property. He thought the resolution before the House should be supported, for he could not conceive how it was possible for the ingenuity of man to devise any system more calculated to bring ruin and misery upon families than the present system, under which a young man of one-and-twenty could, if he chose, get vast sums of money by selling his reversion, and which further discouraged the application of capital to land by the tenant for life who had several children, because he felt that every sixpence he spent upon the land was put into the pocket of his eldest son, and taken away from the money which he would otherwise be able to leave to his younger children. He knew that there was a strong legal and a strong landed interest against the motion, and yet he believed that in a short time the reforms which were now advocated from pure justice and necessity would be carried out (cheers).

Mr. C. S. READ wished to address himself to the first part of the resolution, which declared that the present state of the law as to the entail and strict settlement of land discouraged the investment of capital in the development of agriculture. He confessed that he regarded very large estates as an evil, for when a man had estates in the three kingdoms it was impossible for him to reside upon them all, and he thought it was for the welfare of the country to have a resident gentry. He also admitted that to increase the number of landowners would be a very conservative measure. With regard to the system of entail locking up the land and keeping large estates together, it should be remembered that it also preserved a very large number of small estates from being eaten up by the

larger ones, for many of the yeomanry had their small estates as strictly entailed and settled on them as if they were the first dukes in the land. But it was much better for a man with limited means to be a good large tenant-farmer than a small owner (Hear). As to the building of cottages, one of the regulations adopted by the enclosure commissioners—that every cottage built by means of loans should have three bedrooms—prevented money from being more generally borrowed for such a purpose, for though three bedrooms were necessary for half the cottages on an estate, they were certainly not necessary in the case of all the cottages. They had been told that evening that the condition of the agricultural labourer was better forty or fifty years ago than it was at present, but that was certainly not the case, and he knew, from his own experience of the last thirty years, that the condition of the agricultural labourer had been slowly and gradually improving. They had also had their attention directed to some harrowing pictures of the state of cottages in the agricultural districts, but though 2s. a week might be a great deal to pay for a bad cottage and garden, he could take hon. gentlemen to places within a few hundred yards of the House where the same sum was paid for a single room in which a whole family might be lodging. But the great advantages which were offered by building societies seemed to be greatly under-estimated. In the city of Norwich, a cottage letting for 2s. a week would be worth £75, and upon such a cottage a building society would advance £70, so that the occupier, by paying a rent of 3s. 9d. a week instead of 2s., would in ten years become the owner of the cottage. The hon. gentleman, in seconding the resolution, asked his opinion as to what Lord Leicester said—viz., that the land of this country did not produce half as much as it could; and his answer to that proposition was that the land would not pay to grow as much again. There were many worse tenures than those for life. He was happy to say that leaseholds were fast going out—those by which the lands of corporations, of the Church, and of universities were held, were being bought up, because a good tenant was always sure to pay for his own improvements. Copyholds were another class of expensive tenures. Copyhold law was behold anybody's comprehension, except that of the lawyers (Hear, hear, and a laugh). In the first instance, it was not the duty of the lord of the manor to point out his copyhold, so that if an unfortunate man happened to buy an estate of 300 acres, with 50 acres of it copyhold, and could not exactly point out where the copyhold was the lord of the manor might put his hand on the 50 acres and say, "That copyhold is mine" (No, no). An hon. gentleman said no; but was he aware of what had been done in Norfolk? A man bought an estate of the size mentioned, and could not say precisely where the copyhold portion of it lay; whereupon the lord of the manor stepped in and threatened the unfortunate purchaser with so many penalties that in the end he induced him to enfranchise the land, and as a consequence the man had to pay the whole expense. It might be asked what had that to do with the question? It had a deal to do with it, because it affected small plots of copyhold land. In 1843 there was an enclosure of land on a certain common in Norfolk, and a small plot of a third of an acre was allotted to a relative of his. It was all hills and holes, and covered with fir bushes, the value of it being about a shilling a year. It was drained, levelled, and well cultivated, and became good garden ground. About 1863 the land came to him as heir-at-law, and as the occupier wished to buy it, so as to join it to his own little plot of ground, he offered it to him, when, to his astonishment, the lord of the manor came down and said it was copyhold, though he had never exercised any right whatever. He took the opinion of two lawyers on the point, and was told that the copyhold rights of the lord of the manor were not barred by the lapse of time. The upshot of the affair was that he sold the land as copyhold. It was valued at £13, and the whole cost of the enfranchisement was £28 6s. (laughter), of which sum he had to pay for admission £5 18s. 6d., and the compensation to the steward, who had no vested interest whatever in his fees, and could have been turned out of office by the lord of the manor, amounted to £5 7s. All the money the vendor got from the lord was £12 18s. 6d.; and all the rest had to be paid by the unfortunate purchaser of the little plot of land (Hear, hear, and laughter). So much for copyhold. There should be, he thought, a general act passed to provide that all copyhold should be done away with, and in case a tenant could not pay for

the enfranchisement of the land it should be commuted into a rent charge (Hear, hear). With regard to the question of rates, the hon. gentleman referred to the statement he made last year, that some friend of his bought an estate for £30 an acre, and having spent as much again upon it, made an excellent farm, and grew great crops. But did it never occur to the hon. gentleman that the land was assessed at £1 an acre, and that the assessment must afterwards have been raised to £2 an acre? (Hear, hear). He agreed with what the hon. gentleman had said on the subject of the transfer of land. We could reform our land laws, but could we reform our lawyers? (laughter). Could we not reform our lawyers' charges? (Hear, hear). We could not now prevent the lawyer from eating the oyster and distributing the shells (laughter). The man he had a great dread of was the family lawyer (laughter). What with mortgages, settlements, and entails, the family lawyer was a most wonderful person. He drew all our leases, and put into them such old-fashioned restrictions and conditions that the majority of farmers happily did not read the leases, and if they did they would not know what it all meant (laughter). It was the family lawyer who frequently had the management of the estate, and had under him, perhaps, a superannuated butler or old gamekeeper—a sort of sub-agent—instead of employing a good practical farmer in the capacity of agent. Almost invariably the power lay in the office of the family lawyer. Reform was certainly needed in that direction. But the greatest drawback of all was that of the insecurity of the tenant's capital. Without going into the question of leases, he might simply observe that his calculation enabled him to say with confidence that the small floating capital of the tenant in this country employed in the ordinary occupation of his farm, was some, thing like £1 an acre. He was not talking of draining, digging, or road-making, but merely of the general good cultivation of the land. There were 16,000,000 acres of ploughed land in England and Wales; and he would engage to say that not one-half of it was protected either by lease or by custom of the country (Hear, hear). So that not less than £5,000,000 of capital was employed only in the cultivation of arable land that was entirely at the mercy of the landlords, and subject to six months' notice to quit. All they wanted was compensation for unexhausted improvements. Other matters which discouraged the investment of capital in agriculture were the Game-laws, the Malt-tax, and the heavy stamp on leases. Without wishing to express any further opinion on the subject of entail, he could not help saying that there were, in his opinion, a great many other agencies more destructive to the interest of the tenant, and preventing him from employing capital more generally in agriculture (Hear, hear).

Mr. C. W. HOSKYNs held that if this important subject were brought under the consideration of the landowners in a proper manner it would be found that no class was more interested in the settlement of the question than they were themselves. In the course of four or five years, he believed that public stock equal in the whole to the national debt, passed from land to land in the transactions that took place. Well, if the same difficulties operated in respect to the transfer of those stocks as existed in respect to the conveyance of land the effect would be that the whole of the funds would get into the hands of the great capitalists, and the class of the small fundholders would become entirely extinct (Hear, hear). One acre of land was often as difficult to transfer as 100 acres, as far as the title was concerned. The expense attending the conveyance was not in proportion to the quantity of land transferred, but to the length of time to which the title had to be traced. He was not in favour of the creation of a large peasant proprietary. At the same time the most valuable owners of land were the small holders like those of the old yeomanry class, who had the greatest inducement to spend their money upon the improvement of the soil. There was no country in the world in which the passage of personal property was made so easy as in this, and he thought that the same principle should be applied to the conveyance and transfer of land. It was wonderful that conveyancers, with all their skill, could not devise some other mode of passing the land from hand to hand than the expensive and cumbersome one of deeds, which recited all the births, deaths, and marriages, mortgages, dowers, and other charges which had occurred or been made from the time the property was first acquired. In consequence of this state of things the land of England was, as had been well said, divided between the dead hand and the unborn hand. To remedy this state of things

there was no statute to repeal—nothing, in fact, but the practice conveyancers, to reform. He believed that if the landlords themselves could be brought to see the mischief which arose from the present law of entail they would cease to be opposed to a modification of it. Lawyers were too apt to look upon land as if it were made for nothing but to be put into settlements and tie it up as strictly as possible. The present law operated practically to create perpetuities throughout the country. That was a thing which the old law of England and the old lawyers would not allow. A life owner now had no interest in registering the fee simple; he was merely an annuitant. Let him have absolute power over the land, and be trusted as the commercial community were trusted, and they would see a very different investment of capital in the soil, and they would no longer hear complaints of landlords for not doing that which under the present system they could not be expected to do. Now, the length of the power of the entail over land was the central point of the difficulty, and placed this country behind every other in Europe, in everyone of which entail had been abolished. It was said that the farmers of England were the best in the world, and that he would be sorry to deny; but agriculture and farming were not synonymous terms. There was a difference between being a tenant-farmer and an owner; and if the number of owners was greatly increased he was confident that such outeries of the labouring classes as had recently been heard in Warwickshire and other counties would cease. There was a real connection between the tenure of land and the complaints of the agricultural labourers. The latter were not included in the contract between the tenant-farmer and the landlord, and of course the tenant sought to make the most out of the land at the least cost. The question was one which if not dealt with, in time would become a very dangerous one (Hear, hear). He was quite certain they would confer not only the greatest possible benefit to the community but they would add from 5 to 10 per cent. on the value of their property by joining the farmers in improving the tenure of land in the country.

Mr. GREGORY invited the House to bring back their minds to the wording of the motion, and to abstain from discussing so much that was irrelevant to it. He admitted that too much complication, delay, and expense at present existed—(Hear, hear)—in the transfer of land, and he had made an effort to remedy it by the introduction of a bill which he hoped would receive the favourable consideration of the House on its second reading (Hear, hear). He did not think that the complications, delays, and expenses complained of arose from the entail of land, but from other causes, and he could assert from his own practice that it was equally as great in estates in fee simple as in estates subject to entail. He was at a loss to understand how the law of entail was a discouragement of agriculture by the occupiers, and the mover and seconder of the resolution had felt the difficulty, because they had wandered from the real point of the resolution to the state of agriculture and labourers' cottages. The law of entail was a subject well worthy of consideration, but how had those hon. gentlemen treated it? They had quoted from reports, newspapers, and agricultural writers, the bad state of cottage accommodation, and which, he admitted, existed; but unless it could be shown that it existed in a far greater degree on entailed estates than on others, it had nothing to do with the question. Again it was said the evil did not exist on large estates, but on small properties that were bought up by speculative builders, and held in fee simple (Hear, hear). He was not prepared to admit that the labourers in Northumberland and Scotland were superior to those of the southern counties, but if it were so it had nothing to do with the subject, though the law of entail was much more stringent in the former than the latter case. A great deal of misapprehension prevailed as to what the law of entail was, but the fact was that in nearly every case when the eldest son reached twenty-one the entail was cut off, and the estate was re-held. Now, with regard to the effect of the law of entail on property, he maintained from personal experience that cottages were not in better condition, that tenure was not more secure, or the labourers better cared for than on entailed estates during the minority of the owner; for this reason, that in the hands of trustees with large incomes to deal with, great improvements were effected in drainage and other matters. It had been said that a tenant for life had no interest in maintaining the estate or of raising capital for its improvement, but was it possible to believe

that men were so reckless of the welfare of all around them and so careless of the estates they held as to allow them to go to ruin when it is well known that Parliament had given them ample powers for raising money for the improvement of their estates? Besides the power of getting rid of the entail to which he had referred, the Court of Chancery could, on the application of a tenant for life, order the sale of the estate or give leasing powers to the extent of 99 years, and nearly every settlement contained powers of sale which were constantly acted upon. So far from land being tied up and unmarketable under the law of entail, he found from a publication which was issued by certain auctioneers that there was more land in the market than there were purchasers to be found. It appeared from that publication that there were 100,000 acres of land for sale in the southern counties alone, and that during the past three months one million of money had been invested in the purchase of land in the same district, but if they took the whole of England, Scotland, and Ireland he had no doubt the amount both of land for sale and the sum invested would be found to be double the figures he had quoted. A man left his estate to be divided amongst his children, but the estate was left to trustees, and was not sold except for a reasonable and proper price. There was another difficulty with respect to dealing with the law of entail, and that was that if they abandoned the law of entail as regarded land they put the property on a different footing entirely from the property as entailed. But how was, in that case, a provision to be made for a family? It was admitted that there should be settlements in the case of the sons and daughters, and for the eldest son; and it was admitted that the landed property should be tied up for this object. And yet they said that if the land was left to the eldest son by entail it ought to be tied up. He did not approve of the provision.

Mr. DENT said the hon. gentleman who introduced the bill overlaid it materially with allusions to the neglected state of the labourers' cottages. He, however, went with him entirely in his motion; for he believed that the present state of the law as to the entail and strict settlement of land discouraged the investment of capital in the development of agriculture. He regretted that the tenants of East Norfolk had not the satisfaction which they ought to possess, for, as the House had been told, if they had, the land would be much more cultivated than it was at present, and in fact that the produce of England would be doubled. The hon. member for East Sussex had spoken as if all the entails that existed arose merely from marriage settlements, and for the interest of the tenant in tail till he had attained the age of 21, but there were many cases where property had been left by will. His own impression was that in many cases property having been left for two generations remained in entail till the grandson became of age. Cases were in his knowledge where property had come down to father and to son with charges upon it, where the father would have been a better man if he had been able to sell. He did not think that landlords would get up to support the existing system.

Lord F. CAVENDISH hoped that the House would press most urgently upon the Government that no question more imperatively demanded their attention than that which was now before the House. Still the question remained, How were the landlords to deal with it when they had only a life interest in the estates? The House had been told by the hon. member for East Sussex that there was no connection between the law of settlement and the miserable cottages of which so much had been said. But a few years ago a Royal commission was appointed to inquire into the condition of women and children employed in agriculture, and their statements did not consist of anonymous statements. They were assertions made by a gentleman, the right hon. gentleman the member for Oxfordshire, by a leading agriculturist of Northumberland, and by others; and they all, as with one consent, called attention to the case now before the House. How could a man, succeeding to a very heavily encumbered estate, which must go to his eldest son, and who had to make some provision for younger sons, go into an "expenditure such as would be required for the building of cottages (Hear, hear)?" The average number of cottages built by loan societies was only 127 a year, so that it seemed to be absurd to speak of them as being able to supply the want. Attention had been called to the strike which had occurred in Warwickshire, and the great rise of wages which was going on throughout the country. All

rejoiced to see a rise in wages, and all hoped the rise might be permanent; but there were some who feared they would not be permanent, because the farmer could diminish the amount of labour with very little damage to himself. In consequence of the high price of meat at present the temptation was strong to lay down more grass, and if wages rose very seriously more grass would be laid down. Some said that this might be prevented by a fall in rents or by abolishing the farmer, so that there should be only the owner and the labourer; but in his opinion no better means of ensuring good cultivation could be found than cultivation by tenant farmers. He heartily supported the motion.

Sir F. GOLDSMID agreed in a great degree with what had been said by the hon. member for East Sussex. He thought the injurious effect of the settlement of land was extremely exaggerated by most of the gentlemen who had spoken on the question, and they had attributed the evils which existed to the wrong cause. For instance they had been told that the want of good cottages arose from the entail of land, but the obvious and immediate reason was that good cottages produced no adequate or immediate return for the capital invested (Hear, hear). If they had fee-simple owners, these would not provide good cottages unless they were influenced by benevolence or a wish to improve the condition of their labourers (Hear, hear). He had occupied a hired house in one part of the country, and there was an untidy village near. On inquiring to whom it belonged he found it belonged to a number of small owners, who did not feel the same responsibility as the owner of a large estate (Hear, hear). There would not have been an owner of a large estate who would not have been ashamed to own such an untidy village. He did not mean to say there was no mischief attending the law of settlement in land. He was rather favourable to simplification of titles by making the law with respect to land similar to what it was with respect to personality, so that estates might be disposed of like stocks.

Mr. Disraeli and Mr. Gladstone rose at the same moment, and on each offering to give way Mr. Gladstone finally did so.

Mr. DISRAELI said: I have to acknowledge the courtesy of the right hon. gentleman, but I am not going to trespass on the House for more than a few minutes. I rose for the purpose of referring to one point only, and that was to correct a statement which had been made by the hon. gentleman who had introduced this subject, and which, from the great importance he attributed to the circumstances and the frequent occasions on which it has been referred to during the course of this debate, has exercised a considerable influence on the opinion of honourable gentlemen. The hon. member for Cambridge has proposed a resolution in which he asks the House to pronounce an opinion unfavourable to the present laws of the settlement of land, and he seemed to found his argument in favour of this resolution on the consideration of the agricultural labourers, which appears to me to be introduced somewhat unnecessarily with respect to his main subject. And the condition of the agricultural labourer was principally deplored on account of the very disgraceful and insufficient residences which they inhabited—all of which was to be attributable to the laws of the settlement of land. And the hon. gentleman, in order to make out his case completely, was furnished with what I suppose is the worst instance of the location of the peasantry in England, and it was in the county of Buckinghamshire (laughter). The hon. gentleman—and I am sure all who were present will bear witness that he entered into a very full detail of this instance—described with picturesque language and with great minuteness a row of cottages in a part of a district of Buckinghamshire, and I think all who listened to his description must have agreed that they were habitations fit for no order of the Queen's subjects. But I was perhaps more aware of the circumstances than some of those who listened to the hon. member, because I believe that I read a description in a newspaper yesterday (cheers and laughter). But in pointing out the authority of the hon. member I do not wish in any way to impugn the accuracy of the statement. The statement was perfectly accurate. There is no language that could do justice to the disgraceful and deplorable condition of those residences. An hon. gentleman behind me was extremely indignant at what he considered to be an exaggerated statement, and he wished to relieve the landed interest from having any imputation charged against them, and on these grounds demanded the name of the landlord, and the hon. gen-

tleman opposite did not satisfy his curiosity. I can say from my experience that there is no landlord of the property (laughter), and in answer to those who wish to know on what estate these residences are to be found I beg to say that there is no estate upon which they are to be found. About 50 years ago these miserable dwellings were built on the waste by a tradesman in a neighbouring town, a gentleman I believe of highly liberal opinions (laughter), and he has since arrived at even municipal honours, and is one of the strongest opponents of the landlords (cheers and laughter). I think when an hon. member comes forward to propose a resolution of this sweeping character upon a subject of such importance, and when he founds his resolution upon a general view of the condition of the agricultural labourers of the country, particularly with regard to their residences, and brings forward as his illustrative case the one to which I have referred, it would have been just as well if he had previously ascertained if these miserable dwellings were caused by the law of settlement of land, if they belonged to a landlord, and were built upon an estate (cheers). I believe that the landlords of the particular district of Buckinghamshire have done their duty to their tenantry, and that it is a part of England which is rather remarkable for the excellence of the dwellings of the labouring classes; and therefore I take this opportunity to repel an unjust imputation, and to express my regret that it has been founded upon an illustration that did not at all fit his argument (Hear, hear). I will not enter into the general question; it is one worthy the attention of Parliament, but such a question should not be brought on in this bye-way. I am not disposed at this moment to enter upon a question that requires very full investigation. It is the fashion now to find solutions for the anomalies of our agricultural poor by proposing that a particular class should be abolished. First it was landlords; to-night we have heard a suggestion that we might get rid of the farmers; and further that there might be such a revolution that even the agricultural labourers might be got rid of (Hear, hear, and laughter). I think the matter should not be considered merely upon financial grounds, and social considerations of great importance are involved; but I do not despair that with the assistance of Parliament we may maintain all these classes. The middle-class is the boast of civilization, and I look upon the farmers as not the least valuable portion of that class. I shall be ready when the opportunity occurs to maintain the opinion that I have elsewhere expressed that it can be shown that the condition of the agricultural labourer in this country has been, if not of rapid progress, of sure progress; and if this be the case I do not think that we should despair that in the future it may yet be improved. I do not think that the rent of land is in the danger that some suppose. I think this is a subject of general congratulation, for we have not yet, I suppose, arrived at the conclusion that rent is a public evil, and if we should destroy it we should much diminish the resources of the country; besides which, the theory would not be confined to the holders of land only. I hope that the House will not agree to the resolution. I think that it requires much more discussion than it has yet received, and I also think that it has been introduced to our notice upon a matter that is not germane to the question upon which we are now asked to give an opinion. I particularly object to a resolution of this general and sweeping character founded upon a partial view of the agricultural world, and founded also upon what the hon. member deemed to be a formidable illustration, but which I think I have shown to be altogether deceptive (cheers).

Mr. GLADSTONE: I think that the condition of the labourer is not the sole topic, but still it is a topic of this most important subject. I think it is impossible to deny that there is some degree of connection between the two matters. I do not wish to enter upon the question in a controversial point of view at present, and I am very glad to hear the right hon. gentleman opposite say that the matter deserves very serious consideration. I hope that this motion has been brought forward rather to draw forth an expression of opinion than to solicit a judgment of the House upon the resolution (No). I do not think the four hours' discussion is sufficient to dispose of a question which involves so much complication and so many large and difficult considerations, and with respect to which there is nothing easier than to arrive at an expression of opinion, but there is nothing more difficult than to carry to a successful issue the result of that

conclusion. It is not in a hostile spirit to the general views of the hon. member, but with a desire that the matter should be fully sifted out, that I venture to express the opinion that the matter requires further consideration than we have been able to give it. The question divides itself into three branches—the transfer of land; the succession to land, where the succession follows the course of law, and is not determined by the will of a testator; and thirdly, entail, and settlement, and limited ownership in general. Upon the two first subjects we are greatly in arrear; and I would suggest that it is not expedient that we should hasten the third branch until we have done something to redeem our pledges upon the first and second. There seems to be unanimity of opinion in reference to the transfer of land; and as to intestate succession of land the Government are under a special pledge to deal with the subject, though the pressure of other business has prevented us as yet from dealing with it. The hon. member may, however, very fairly wish to know the general views of the Government upon the subject of his motion. For my own part I will say that I heartily concur in the opinion of the right hon. gentleman opposite, that the entire subject of the laws of entail and limited ownership of land deserves the attention of Parliament. I am not one of those who think that the adoption of the views of my hon. friend would produce a great or fundamental effect upon the general distribution of landed property in this country (Hear, hear). We have at present a system under which land is held generally in large properties and the tendency towards such properties is increasing. No doubt there are counteracting causes at work, but, as an hon. gentleman opposite observed, it is difficult to believe that it will be possible for the yeomanry of this country to hold their ground as proprietors of the soil (Hear). It appears as if there were causes in operation which must gradually and gently, but with certainty, transform them into tenants and occupiers, instead of owners. It is not the custom of primogeniture, it is not the law of entail or of settlement that determines the holding of the land in this country in comparatively large masses. It is an economic law far more powerful than any statute or custom which, closely associated with the constitution of society, and taken in connection with the limited area of the soil, I believe places it beyond the power of man—at least, within those wise limits to which legislation in this country is usually confined—to make any great alteration with regard to that state of things under which land is extensively held in large properties (Hear, hear). I believe there is another fundamental portion of the system under which land is cultivated in this country which is likewise independent of the law of custom, and which is determined by economic circumstances. The land in this country is chiefly cultivated, not by owners, but by occupiers who are not owners, and that is a state of things which I believe to be, under certain circumstances, not desirable, but which it is not possible to change. There is another question of great consequence and interest upon which opinions are reported to be held in some quarters that I regret. There are those who say not only that land may be held in large properties, not only that land will be cultivated by occupiers rather than by owners, but who add to this a prophecy of rapid and general extinction of small tenancies in this country. The authority to which I refer is a report that has doubtless been extensively read of a speech delivered by Lord Derby some few months ago, with reference to which I venture to entertain the hope that the noble earl may have been misunderstood. The report contained the expression of a confident opinion to the effect that as the improvement of the machinery of manufacture had led to the extinction, or nearly so, of hand-loom weaving, so the introduction of machinery into agriculture would gradually lead to the extinction of small tenancies, and that the surface of this country would be divided into so many large farms. I do not share that opinion, and if I did I should regret the extinction of small tenancies as a great public calamity (cheers). If there were any danger of such an issue, I should contemplate it with a degree of regret which no words can express (Hear, hear). Now, sir, the topics of my hon. friend and those who have supported him have been very varied. They have spoken of difficulties which they think are imposed in the way of the application of capital to the soil generally and for the purposes of cultivation; of the difficulties in the way of the erection of cottages; of the arguments in favour of the law of entail with reference to ancient families; and they have given opinions to the

effect that the maintenance of ancient families ought to depend upon the conduct of their members, and not upon statutory arrangements directed to that end. They have spoken also of the operation of the law of entail in creating an independence of young men with regard to their parents, with reference to which a very great deal may be said; and as to all these arguments, I go so far with the hon. member as to admit that there is much to be said in favour of the views he supports, although I will not presume to say that they ought to be adopted without qualification. But I am sure he will not think I am taking a captious course when I plead, in the difficulty in which we stand, that it is not expedient to ask of the Government nor of the House any declaration upon a subject of this kind, so large and so complicated, unless it be at a time when we are prepared to come forward with the steps necessary to give practical effect to such a declaration. We ought to be allowed as a Government, when we find an opportunity—or our successors, whoever they may be—to consider what proposals ought to be made to Parliament on this important subject, without being fettered by previous resolutions of the House of Commons. It is a great mistake to believe that progress is practically achieved in regard to questions of this kind by passing what are called abstract resolutions (Hear, hear). Those who feel that they have before the public a large number of unredeemed pledges ought to show reluctance to add to the largeness of the stock, and I trust my hon. friend will be satisfied with the discussion he has promoted, and the degree of favour which his motion has experienced. I therefore would respectfully beg my hon. friend not to press the motion to a division.

Mr. W. FOWLER said he had referred not merely to the case mentioned by the right hon. gentleman opposite (Mr. Disraeli), but generally to the remarks of the Commissioners. If he had done wrong in alluding to the case, he deeply regretted it, but at the same time he wished the House to understand what the state of things really was, and he believed his argument had been perfectly germane. He was unable to accede to the appeal of the right hon. gentleman, as he wished to obtain the opinion of the House, and if the right hon. gentleman could not give an opinion, it would be easy for him to walk out of the House (Hear, and a laugh).

The House then divided—

For the motion	81
Against	103
Majority against.....	—22

The numbers were received with loud cheers from the Liberal benches below the gangway.

MINORITY.—AYES.

- Anderson, G.
- Armitstead, G.
- Baines, E.
- Beaumont, S. A.
- Beaumont, H. F.
- Bouverie, Rt. Hon. EP
- Bowring, E. A.
- Brewer, Dr.
- Brinkman, Capt.
- Brown, A. H.
- Buckley, N.
- Carnegie, Hon. C.
- Carter, R. M.
- Cartwright, W. C.
- Cavendish, Ld. F. C.
- Cowper, Hon. H. F.
- Dalghish, R.
- Davies, R.
- DeLahunty, J.
- Dent, J. D.
- Dickinson, S. S.
- Dixon, G.
- Dodds, J.
- Duff, R. W.
- Erskine, Adml. J. E.
- Fawcett, H.
- Fitzmaurice, Lord E.
- Fletcher, I.
- Gower, Hon. E. F. L.
- Harcourt, WGGVV
- Herbert, Hn. A. E. W.
- Hoare, Sir H. A.
- Hoskyns, C. W.
- Howard, J.
- James, H.
- Johnston, A.
- Kinnaird, Hon. A. E. F.
- Lawson, Sir W.
- Leatham, E. A.
- Leeman, G.
- Locke, J.
- Lubbock, Sir J.
- Lytelton, Hn. C. G.
- Macle, R. A.
- Mackintosh, E. W.
- McLagan, P.
- Miller, S. S.
- Monk, C. J.
- Morrison, W.
- Mundella, A. J.
- O'Reilly-Dease, M.
- Parker, C. S.
- Pease, J. W.
- Playfair, L.
- Phinsoil, S.
- Potter, T. B.
- Price, W. E.
- Rathbone, W.
- Richard, H.
- Russell, A.
- Rylands, P.
- Seymour, A.
- Shaw, R.
- Simon, Mr. Serjeant
- Simclair, Sir J. G. T.
- Smith, B.
- Strutt, Hon. H.
- Swain, R.
- Vivian, A. F.
- Wedderburn, Sir D.
- Whitbread, S.
- White, J.
- Whitwell, J.
- Whitworth, T.
- Williams, W.
- Wingfield, Sir C.
- Young, A. W.
- Tellers.
- Fowler, W.
- Brand, H. R.

MAJORITY.—NOES.

- Ancotts, Col. W. C.
- Antrobus, Sir E.
- Arkwright, A. P.
- Arkwright, R.
- Ayrton, Rt. Hn. A. S.
- Bagallay, Sir R.
- Barrington, Visct.
- Barttelot, Colonel
- Bates, E.
- Beach, Sir M. H.
- Beach, W. W. B.
- Bentinck, G. C.
- Bingham, Lord
- Birley H.
- Bourne, Colonel
- Brassey, H. A.
- Brise, Col. R.
- Broadley, W. H. H.
- Bruce, Rt. Hn. Ld. E.
- Bruce, Rt. Hn. H. A.
- Buller, Sir E. M.
- Campbell, H.
- Cawley, C. E.
- Charley, W. T.
- Coleridge, Sir J. D.
- Collins, T.
- Corbett, Colonel
- Croft, Sir H. G. D.
- Cross R. A.
- Cubitt, G.
- Dalrymple, C.
- Davenport, W. B.
- Dimsdale R.
- Disraeli, Rt. Hn. B.
- Dowse, Rt. Hon. R.
- Duff, M. E. G.
- Dyke, W. H.
- Eaton H. W.
- Egerton, Capt. Hn. F.
- Elliot, G.
- Enfield, Viscount
- Ewing, A. O.
- Fellowes, E.
- Figgins, J.
- Fitzgerald, Rt. Hon.
- Lord O. A.
- Fortescue Rt. Hn. C. P.
- Fowler, R. N.
- Gladstone Rt. Hn. W. E.
- Gladstone, W. H.
- Goldsmid, Sir F.
- Gore, J. R. O.
- Goschen, Rt. Hn. G. J.
- Graves, S. R.
- Gregory, G. B.
- Grosvenor, Lord R.
- Guest, M. J.
- Hamilton, Lord G.
- Henley, Rt. Hn. J. W.
- Hildyard, T. B. T.
- Hogg, J. M.
- Holt, J. M.
- Hope, A. J. B. B.
- Hunt, Rt. Hn. G. W.
- Hurst, R. H.
- Jardine, R.
- Jones, J.
- Kennaway, J. H.
- Kingscott, Colonel
- Liddell, Hon. H. G.
- Lowe, Rt. Hon. R.
- Lowther, J.
- March, Earl of
- Mellor, T. W.
- Milles, Hon. G. W.
- Monsell, Rt. Hon. W.
- Noel, Hon. G. J.
- O'Connor, D. M.
- Parker, Lt.-Col. W.
- Peel, A. W.
- Phipps, C. P.
- Powell, F. S.
- Price, W. P.
- Read, C. S.
- Round, J.
- Sackville, S. G. S.
- Sclater-Booth, G.
- Smith, W. H.
- Smith, S. G.
- Somerset, Ld. H. R. O.
- Stapleton, J.
- Starkie, J. P. C.
- Sykes, C.
- Talbot, J. G.
- Tipping, W.
- Turner, C.
- Walker, Major G. G.
- Walpole, Hon. F.
- Walter, J. G.
- Waterhouse, S.
- Welby, W. E.
- Wells, E.
- Winn, R.
- Winterbotham H. S. P.
- Tellers.
- Glyn, Hon. G. G.
- Adam, W. P.

PAIRS.

For.	Against.	For.	Against.
Mr. H. B. Sannelson	Mr. Lord Newport	Mr. Maguire	Mr. Stapcoole
Mr. Gilpin	Mr. Malcolm	Mr. Boickow	Col. C. H.
Mr. H. Lewis	Mr. Laird.	Mr. C. Forster	Lindsay
Mr. Horsman	Col Learmouth		Mr. E. S. Gordon

THE TOWN AND COUNTRY WORKMAN.—The English agricultural labourer is entirely a different man in habits and mode of life from the English town labourer, whether mechanic or manufacturing hand. He is taller, bigger, and stronger, but not so acute and restless; slower, and less energetic. He does not consume one-tenth of the animal food that the town operative devours, but he does not drink one-twentieth of the quantity of alcohol. He may occasionally get a little muddled on muddy ale or sour cider, but he is never incapable for three days in the week. He lives in the open air, and is exposed to all weathers; his clothing is, as a rule, not insufficient; but his food is chiefly bread, potatoes, suet dumpling, and vegetables, with a little pork or cheese, but very rarely fresh butcher's meat. He sleeps probably over a dunghoop or near a cesspool, with his wife and half-a-dozen children in the same room, and is very fortunate if he escape an attack of continued fever once in his life. But his great enemy when he is over fifty is rheumatism, and this consigns him to the care of the parish during the last decade. Still his existence has its bright side. He rarely knows what a headache is. His labour is of the slow, enduring kind which does not exhaust; and if he escape death from continued fever or accident, he lives beyond three-score years and ten. His children are healthy, they are not syphilitic or strumous, and his wife does not suffer from "nerves." The town operative, who earns twice as much money, and who could earn three times as much if he worked all the working days of the week, dies at fifty, and rarely passes a year without being an out-patient at a hospital or getting some medicine from his club doctor. One of his children has hip-joint disease, and another is blind with one eye from keratitis. His wife spends nine hours a week waiting for the doctor in the out-patient room of a hospital. He was a clever, intelligent lad, with a smattering of education, but after thirty he got heavier and more stupid, and has long given up all idea of climbing to a higher round in the social ladder.—*The Medical Times and Gazette.*

THE NOTTS CHAMBER OF AGRICULTURE.

The quarterly meeting was held in East Retford; Lord Galway in the chair.

Mr. HUSKINSON (Epperstone) read a paper on compensation for unexhausted manures and improvements: He said it may perhaps be as well, as the public may hear of the subject for discussion, to insist at once upon the broad differences which exist between English Tenant-Right and what is known as Tenant-Right in Ireland. Although the words used are the same for both systems, there is scarcely anything in common between the two. The English system aims in principle to pay an outgoing tenant for work done or unexhausted manures. What is known as Tenant-Right in Ireland (judging from the report of the Commission on the subject of which Lord Devon was chairman), is the sale of the good-will. This payment, the committee states, depends upon no improvements, is paid even when a tenant has deteriorated a farm, and is a mere purchase of immunity from outrage, and has sometimes amounted to forty years' purchase on the rent. In fact, to take the evidence of one of the witnesses, it amounts in principle to reducing the owner to be a mere annuitant on his own property, like the owners of land in Holland subject to what is known as *Beklem-recht*. Because the word used in both cases is the same, to suppose that the ideas signified are also the same, is as absurd as to suppose that before 1870 an Alsatian peasant in physique, in customs, manners, and language, was the same as an inhabitant of Central France, because they were both called Frenchmen. As this Chamber has met for the practical discussion of a practical question, it would be out of place to make any reference to the origin and growth of Tenant-Right, and as the conditions differ so much there would be no benefit, even if there were time, in considering the principle laid down in the code Napoleon, which is the law in France, and partially so in the Rhenish provinces of Prussia, or in comparing our English system with what is known of the customary "*Pachter-recht*" in Belgium. The English Tenant-Right in its various forms—and it has many various forms—aims only at one principle, viz., to repay to an outgoing tenant what fairly belongs to him. Thus, when an incoming tenant pays a round sum, say £500, for Tenant-Right, it may be divided for the sake of clearness into the following heads: 1st. Payment for property of the outgoing-tenant left behind, such as tenant's fixtures. 2nd. Payment for labour done and seed supplied to the land, for which the outgoer derives no benefit. 3rd. Payment for unexhausted manures or improvements. If we consider these separate items which make English Tenant-Right it appears to me that with respect to the first, payments for fixtures, it is on general grounds advisable that the amount should not be excessive, for the sum laid down by the incomer does not return to him until he in turn leaves the farm. Fixtures, therefore, to an excessive amount tend to lock up the tenant's capital, which ought to be profitably employed in the cultivation of the farm. With respect to the second item, payment for labour done and seed supplied, we have in this country nothing to complain of, but I think the system of half tillages, which is the custom in Surrey and in some parts of the West Riding of York, is very objectionable. It is a system which makes a heavy Tenant-Right without any compensating advantage, and tends uselessly to lock up the tenant's capital. In the best farmed counties of England the system is unknown. With respect to the third item, payment for unexhausted manures, it is a payment which a tenant would make with satisfaction if he felt sure that he had his money's worth. As a recent paper in one of the periodicals has stated, a Flemish farmer likes a moderately high Tenant-Right, for he likes to take to land in the condition which a moderately high Tenant-Right indicates. An excessive Tenant-Right has undoubted and very great objections. It limits an owner in the choice of tenants, and its effect on a tenant looking out for a farm is either to limit his choice, or if he ventures on a farm where the capital required is more than he can find, he is either crippled in his operations or reduced to borrowing money. At the same time it does not appear to be correct, as is sometimes stated, that Tenant-

Right, as a whole, is merely locked up capital. On analysing a round sum paid for Tenant-Right we find that the incoming tenant is repaid part, that for seed and labour, in the next crop; and his payment for unexhausted manures is returned to him in a few years, either in increased quantity or better quality of produce, or both. The payment itself is based on the supposition that within a few years he will reap the benefit, and it is because he (the incomer) reaps the benefit instead of the outgoer who laid out the money, that the money is paid at all. What strikes any man who has to do with land in different counties is the variety, the bewildering variety, of English agricultural customs, many of which relate to Tenant-Right. The same customs frequently do not hold throughout even one county. After reading a paper in the Royal Agricultural Journal on the agricultural customs of England, and observing the variety, sometimes based on good grounds, sometimes without any apparent reason, one is tempted to apply to them the words of Tennyson when he speaks of

That wilderness of single instances,
That codeless myriad of precedents

Thus, in some places the manure belongs to the tenant—in other places to the land. In some places rents and rates are charged on the fallow land—in other places they are not charged. In some counties half tillages, &c., are charged—in other counties they are not. Some counties have following crops, and some have not. And as to the variety in the compensations for unexhausted manures, &c., I shall allude to it directly. One authority on agricultural customs states that the Tenant Right in Surrey, where payments for tillage are very excessive, is twice that of Suffolk, and six or eight times as much as Bedfordshire, assuming the course of cropping to be the same. With respect to unexhausted manures or improvements, I think all are agreed that the outgoing tenant should be fairly and liberally repaid for his outlay. It is the interest both of the incoming tenant and the owner—of the owner, because it is his interest to encourage good farming, and the tenant, because the custom forms a security for his money laid out in the land. At the same time, I am of opinion that any allowance beyond what is a liberal measure of the benefit the outgoer would have had from his outlay if he had not left the land is pernicious in its tendency. The excess is locked-up capital, which the incomer never gets back until he leaves. I think that system is best which compels the tenant to invest the least amount of unproductive capital. Supposing £50 fairly represented the benefit the outgoer would have reaped from some bought manures. That benefit the incomer receives within a few years. If for that manure it was the practice to pay £60, then the £10 excess is sunk until the incomer himself leaves. That £10 benefits nobody. It does not benefit the tenant, because it pays no interest. It does not benefit the owner, because, although a fair Tenant Right is useful as a security for rent, yet an excessive Tenant Right, on the whole, not only limits the choice of a tenant, because, unfortunately, in this world there are more persons possessing £1,000 than £2,000, but it tends to reduce the rent he might receive, because, undoubtedly, if much of the capital of a tenant has to lie dead he cannot afford to pay the same amount of rent as if all were productive. In calling the third item of my division of Tenant-Right compensation for unexhausted manures and improvements, I do not refer to what may be called permanent improvements—buildings and drainage. These ought to be done, and are usually done, by the owner, who is permanently interested. If done by the tenant, they take part of his capital and invest it at four or five per cent., when it ought to be paying him from the cultivation of his farm eight to ten per cent. The works, too, are more likely to be efficiently done by one who has not a temporary but permanent interest in the soil, and who often has at command men whose business it is to do these things, and who may be supposed to have acquired skill and experience. The objection there formerly was that it was hard for gentlemen who were tenants for life only to be called upon to invest part of their income in per-

manent improvements has now no force. Any conceivable improvement can now, by Act of Parliament, be executed and charged on the land, the money being borrowed either of a public company or from a private individual under the Improvement of Land Act. And now, gentlemen, as to the variety in the practice of compensating for unexhausted manures, &c.; I say practice instead of custom, for custom has a technical signification. Land is held from year to year either without an agreement or with an agreement, and the agreement may have special clauses as to unexhausted manures, or it may not. If it has, those clauses determine the compensation; if it has not, or if there be no agreement, the compensation is settled by the custom of the country. This custom of the country holds unless specially excluded. Such being the case, special clauses may be deemed to have been inserted to improve upon the custom. As a matter of fact, comparing different customs and agreements, there is a very great variety in the way outgoing tenants are compensated. I will give you an instance as to linseed cake. In one part of Lincolnshire (and in mentioning Lincolnshire, one cannot help remarking that although the Scotch farmers talk so much of leases in Lincolnshire with yearly tenancies and a good tenant-right, there is as good farming as any in the world) the allowance is one-third of two last years' cake bill. On Lord Yarborough's estate it is one-third of the last year, and one-sixth of the year before. From an agreement in Northamptonshire I find an allowance of one-third last year's use. In Nottinghamshire I know farms with one-fourth last year, and one-eighth the year previous; others on the same estate with one-sixth of the last three years; another case with one-fourth of last year, and one-eighth of two years previous; another with half one year's consumption on an average of the last three. Supposing that one farmer spent in cake £100 per annum for three years preceding leaving, whom we will call A, and another spent £100 in the last year, and nothing in the two years preceding—we will call him B. Now for the result of the various practices. A would get, depending upon which practice was pursued, £66, £49, £33, £37, or £50 in the three cases, and B would get £33 in three cases, £25 in two cases, and £16 in two cases. Making every allowance for variety of circumstances, which in matters agricultural ought always to be done, there is variety enough here without any apparent principle regulating that variety. I must confess a leaning to the practice of half one year's use on the average of the last year as it gives nearly the highest amount mentioned to A and the least to B. I might have given one case from a standard book, which gives the same allowance to both, but I consider it so hopelessly out of accord with general practice that I omitted it. As to time it is the same. I could give you two customs, one of which gives twice the allowance of the other. The variety of custom is so great that many men have had the idea that Parliament should take measures to bring matters to a uniform basis. This subject is discussed in a well known agricultural work. The decision is, and I think of necessity, that Parliament ought not to be appealed to in the matter. I would go further and say that it is utterly unlikely Parliament would interfere, even if applied to; for on consideration the difficulties in the way of compulsory uniformity are enormous. Some Tenant-Rights are more than others—if the high Tenant-Right is taken as a standard the others must be approximate to it; if the low is taken as a standard the others must be reduced. Now what does this really mean? Take the case of following crop which obtains in some counties, as an illustration. If it is to be abolished compulsorily, either of two things must happen: the tenant must be paid the difference between the amount of following crop and a seed and labour valuation or not. Can any one suppose Parliament would take away a right without compensation? Supposing then he is paid, who is to pay him? It is not to be supposed that Parliament would compel the owner to invest money in this. It would not be reasonable to suppose it. How then is the money to be raised? Let those who raise the question of compulsory uniformity answer the question. Or take the opposite case; supposing that the usual custom of rent and rates on fallows is part of the standard valuation, then on those estates where such is not the custom the tenants are presented with the difference between the two. It would be very agreeable to the fortunate tenants, no doubt. Can nothing then be done to abolish customs that are admitted to be bad, and to introduce

good ones. To this I say this is being done day by day. When owners and tenants are satisfied any plan is for their mutual advantage they can adopt it by agreement, and as to getting rid of bad customs they can be done by the owners when they are disposed to invest money to do it; a following crop has been extinguished on many estates in Notts, by the owner paying the difference between it and seed and labour valuation. It is to voluntary action and mutual agreement that we must look for improvement. The discussion of these subjects, if done in a calm, moderate, and temperate manner, may help mutual understanding, and that owners and tenants of land in England may ever preserve what they have now—confidence in each other, and good feeling towards each other—is my earnest wish.

Mr. BUTLER (Radcliffe) said Liberal landlords treated their tenants liberally, but then all were not liberal landlords. The great thing which was wanted was that they should know one another better, and that was one of the reasons why they invited landlords to meet them at the conferences which were held in such Chambers, in order that they might discuss all such matters, and arrive at a just decision favourable to both parties. There was one point in regard to unexhausted improvements with which he wished to refer. Supposing a tenant of a farm made a road on his land which was much needed, and that when it was made it was no good as a turnpike. Well the tenant perhaps died, and the landlord having some pique at the tenant's children gave the farm away to a stranger, all that had been invested by the tenant would then be lost, and would go to enrich the estate of the landlord. Then came another question. A tenant took a farm perhaps in a very bad state of cultivation—everything completely dilapidated—and by dint of skill, perseverance, the employment of capital, and industrial integrity, he brought it to a state of good cultivation, and was known as one of the best farmers in the district, where was the compensation in such a case as that? His own brother was placed in just such a position. He drained all his fields, re-hedged them, and improved the whole farm, very much at his own expense. He died, and Lord Manvers allowed his son to succeed him, but perhaps the son might have been in disgrace, and the landlord might not have accepted him. This was the point he aimed at. He would like to see a good understanding between all landlords and tenants, and that a well defined principle should exist by which, in the circumstances he had named, both the landlord and the tenant would be mutually satisfied. Something might happen to himself—he might die to-morrow—and what he wanted to see established was some rule by which tenants who had improved their land in any way should receive the benefit of that energy, skill, and capital, either in their own persons or in that of their families, in the circumstances to which he had alluded. He had great respect for the landlords in the county of Nottingham, and he hoped that they would not be backward in lending a hand to the settlement of this very important question.

Mr. FIELD (Farnsfield) had some experience in matters referred to in Mr. Huskinson's paper; and he was sure the whole of it was true. With regard to unexhausted improvements in the shape of tenants' right to manure, cakes, and other things, it was only on large estates that a proper rule was laid down. This subject came before him, he might say every day, and it was only when they stepped out of the large estates that the difficulties began, inasmuch as some had one-fourth others a half, and some again a sixth, so that it was very difficult to strike a medium. The facts which Mr. Huskinson had brought before them were of the utmost importance; and he was sure all the members of the Chamber would be much indebted to him for the trouble he had taken. He quite agreed with Mr. Huskinson as to his appeal regarding Tenant-Right. He thought it was the duty of the tenant to take his case before the landlord, who might refer it to his agent or to an arbitrator, giving at the same time the benefit of his advice; and he was quite sure that if the landlord would only act towards the tenant with good feeling, much of the present difficulties would soon be done away. He was sorry that Mr. Butler had taken so poor a view of Mr. Huskinson's paper—he hoped in time he would come to take a better.

Mr. BUTLER quite endorsed all Mr. Huskinson's statements—all he said was that he did not go far enough.

Mr. G. STORER hardly expected to find so much difference of opinion on the paper which had been read by Mr. Huskinson.

son; but he thought the difference had arisen from the farmers not understanding the gist of Mr. Huskinson's remarks. The farmers as a class had been very severely criticised in the London papers, by a class of men who knew very little about what they were writing. In fact every tyro who travelled across the country in a railway carriage thought it was quite his place to criticise the farming of the district, although, very likely, he knew little or nothing about what he was writing. There was no doubt of this, that though in some districts improvements were required, land in general was much better farmed than it was twenty years ago; and improvements of any kind could not take place in a day, they must be gradual. It was very desirable, both for the interest of the landlord and the tenant, that the land should be kept in a fair state of cultivation. At the same time, he doubted much whether a larger sum than what was now paid should be allowed the tenant for sums invested, as that would be rather preferring him to the incoming tenant; and it was always to the advantage of the outgoing tenant that the land should be kept in a good state of cultivation. He doubted much whether legislative enactments would do much to help the case. At present there were so few agricultural representatives in Parliament that if they were to take up the question there was much more likelihood of its being muddled than anything else. He thought the much more likely channel for improvement would be through the medium of Chambers of Agriculture, and that by means of such discussions as the present landlords might be led to look into the question and, where necessary, to concede the larger amount of compensation where it was proved to be necessary or desirable. He would not suggest any particular plan as the best to be followed, but what was wanted was that a proper incentive should be given to keep the land at all times in a high state of cultivation. As to tillages, he had had the misfortune to possess a farm in Surrey, and there it seemed to him that the farmers were in a perpetual state of locomotion, and could never settle, and his experiences of that county were not of the most pleasant character. Coming to the general question, he thought it was the duty of the landlord in the first instance to do all permanent improvements on the farm, and to put the land in such a state that the tenant need not lay out a great portion of his capital in buildings or permanent improvements. He had always looked on the landlord and tenant as co-partners—the landlord finding the land, the tenant the capital and the labour to cultivate it. Some of those whom he was addressing stood in both positions, and they would be able to appreciate exactly the argument. The landlord must have a certain amount of interest in the land—the tenant expects interest for his capital and energy. If both interests were properly balanced they would never clash. He had said that any permanent improvement should be made by the landlord, but there was no rule without exception. Sometimes gentlemen succeeded to an estate, and were only too glad to find tenants with capital to improve the land; but he would say this, that in all cases were tenants have laid out money with the knowledge and consent of their landlords, there should be a proper allowance for money so invested. Probably a court of arbitration would answer the purpose intended; but on this point he did not feel competent to pronounce an opinion. He begged cordially to thank Mr. Huskinson for his very able and interesting paper.

Mr. HEMSLEY said: Tenants are not asking landlords to concede anything as regards this question of unexhausted improvements, except upon that point of permanent works so forcibly put before the Chamber by my friend, Mr. Butler. I believe landlords may be considered to have very little to do with this subject in practice; and only in point of law are they in the position of incoming tenants, the incoming and outgoing tenants being the parties really concerned. I think this subject of great importance, because its extension may be not only the means of increasing the security of the capital employed in cultivating land, but also that it may act as an inducement to increase that capital; and there is also this necessity, that tillers of the soil do not receive the full benefit of their outlay for two or three years frequently after it is invested. There appears to me to be a necessity for an increased amount of security to the tenant-farmer if, as we are led to suppose, large estates are to be made into smaller ones; and I believe the more simple you make the transfer of land the more necessity there is for these customs to be extended. In fully entering upon this subject we should bear in mind that

a farm, in this country even, may be brought into the best state of cultivation and still not be entitled to a shilling for unexhausted improvements, and rightly so, when nothing had been brought to it by the outgoing tenant. I am not going to find much fault with the Notts custom in valuation for unexhausted improvements, because I think it is the best that has come under my notice. Of course we expect that no allowance is made for bought manures and cakes until a full equivalent is made for whatever has been sold off. In the case of cakes bought for food, which Mr. Huskinson alluded to so forcibly, I am bound to say that I thought one-fourth for the last and one-eighth for the last year but one sufficient to pay on entering upon a farm, and was satisfied with the same arrangement upon quitting; but in the case of corn and flour being consumed instead of cake, I confess I think the Notts custom is rather loose, and no distinct line seems to be established. Of course there is only a relative value to be attached to manure from these as compared with cakes. The difficulty of arriving at the quantity consumed is great, and must at all times be fully proved to the satisfaction of valuers before an allowance is made. Some excellent arrangements have been made upon properties in South Notts by that worthy farmers' friend, the late John Hassall; but these agreements do not, of course, amount to customs in general. There is also straw, which Mr. Huskinson has not mentioned in his paper, and which upon some farms amounts to a considerable item. Now, as I think with my friend, Mr. Huskinson, that it is not desirable to lock up capital in payments for unexhausted improvements, without a corresponding benefit, I believe that straw might very well remain the property of the owner of the soil. I am aware that many opinions are contradictory upon this point. Then draining is not paid for longer than the sixth or seventh year. Now upon some land that I have drained myself, the drains did not get into thorough working order until the second or third year, and quitting the land the sixth year I got no allowance. I think this allowance should be extended to 14 or even 20 years. Undoubtedly Mr. Huskinson's suggestion—that this improvement should be effected by the owner—is the right one, but where tenants pay for cartage of tiles I think four per cent. is the maximum rate of interest that should be charged to them. Any buildings also required should be put up, in my opinion, at the cost of the owner, as there appears to be no custom to pay the tenant. In the item of lime also, I think three years is too short a time for it to be allowed to work out. In respect to leases, I think a system of payment for unexhausted improvements would be of much benefit during the latter part of the lease, and might prevent the land being run out during the last course of the lease. As to leases in general, I would just say that in this county and in Lincolnshire I do not think that we farmers, as a body, care for them, for with liberal customs in payment for unexhausted improvements, and a great many of us living under landlords of the stamp of our noble chairman, and many others that I could mention, we do not care to be trammelled with a lease which binds the tenant sometimes in a very inconvenient manner as well as the landlord. There is just another point that I should like to name, which I have alluded to already, and that is the inducement or want of it to employ more capital in cultivating lands more highly. It may at first sight seem strange that traders in money would rather invest in all kinds of wild schemes in all parts of the world rather than employ their capital in cultivating the lands at our very doors in a higher state; but to practical men causes do appear to deter them, not only in the small profits to be divided amongst all connected with land, even under favourable circumstances as compared with trade and commerce; in innumerable losses over which skill and capital have no control—the variety of diseases amongst the live stock upon our farms and enormous losses in consequence—also the failure of crops in such ungenial seasons as the last four or five, at all times a variable climate—when very frequently the highest cultivated crops suffer the most—these, and many other things over which we have not any control, seem to point to the risk being too great to attract a speculator. Still I must call myself back to my starting-point, and repeat that I believe a well-arranged system of payments for unexhausted improvements would not only act as a security to what capital is being invested, but would be an inducement to increase it, for which we cannot deny there is a very wide if not a very safe opening. But, my lord, allow me to say that

I do not quite like the practice of finding fault without suggesting something as a remedy. I will, therefore, with your permission, put this resolution into your hands either to put to the meeting or to deal with in any other way, "That it is the opinion of this Chamber that local bodies should recommend for adoption a system of payments for all unexhausted improvements suitable for each peculiar district."

The CHAIRMAN said he doubted whether they could pass such a resolution that day, as other subjects were set down for discussion. He thought it would be a good plan, as there was scarcely time to discuss the matter fully, that it be left over till the next quarterly meeting at Mansfield.

Mr. FIELD said, in reference to the corn, flour, and other matters mentioned by Mr. Hemsley as consumed on the farm for which the outgoing tenant did not receive any compensation on his consumption, he was happy to say that he saw before him tenants on the estate of Mr. Savile who were aware that compensation was granted for the corn bought and consumed, not alone for the corn grown; and about that there could be no mistake. The farmer might sell his produce, but compensation was allowed for corn bought and ground and consumed, such as Indian-corn and anything else of that sort. On the farms belonging to the late Earl of Chesterfield that was a daily occurrence. As they had his lordship in the chair, he might say that if he would kindly render them assistance a great boon would be conferred on the tenant. Indian-corn was about the very best thing they could give to lambs, and unless they were paid for the amount of money so laid out they would be completely robbed. With regard to straw, he could tell them that the farms he went over as valuer where the straw belonged to the landlord were the worst farms he saw. Why was that? Because the farmer cared nothing about the straw that was not his own. With regard to drainage, he thought that Mr. Hemsley took a large leap when he went from seven to fourteen or twenty years. Respecting compensation for lime, it depended very much on the character of the lime, for some lime would be exhausted in two years, when another description would not be exhausted in four. He was pleased at Mr. Hemsley's remarks respecting leases, for he was satisfied that where there were large estates and good landlords like the Duke of Portland and Lord Galway, yearly tenancy was the best.

The CHAIRMAN said that he feared there would not be time to discuss Mr. Hemsley's motion, or rather to do so properly, and he would suggest that the discussion be postponed to the quarterly meeting to be held at Mansfield.

Mr. HUSKINSON, in replying to the observations made, said that with respect to the phrase "permanent improvements," general expressions led to no end of fallacies. He wanted a definition of "permanent improvements." To mention two of them, building and drainage, in this country there was a custom by which they had an allowance for seven years for any drainage done by the tenant, but he was satisfied it was better that it should be done by the landlord, and the interest on the outlay charged to the tenant in the way of rent. With regard to buildings, there was no custom; but he could not help feeling that if a man erected buildings without consulting his landlord it was right he should lose them. If it was possible to make an allowance for corn consumed on the

farm it would be a good thing; but what reliance could be placed on the accuracy of a man's memory or the statements of his men? I have a letter in my pocket from the tenant of a large farm on the subject of corn, flour, and other matters, and he agrees with me that, although in principle it is perfectly right to allow for corn and these things, in practice it is impossible to carry it out. We have only one common principle to go upon for compensation—that it is for the interest of the incoming tenant not to pay too much, and that any excess over the fair value is so much lost capital. But as to allowing three or four years, or fourteen or twenty years, it is all the rule of thumb, only regulated by the conclusions of people that in these periods their improvements run out. Again, I repeat that any compensation given to the outgoing tenant over the fair value is pernicious and an absolute loss to the incoming tenant.

The CHAIRMAN wished he could do more as a landlord than he felt he could do: and he believed there were many landlords in the same position. He was glad to say that in Notts they were not like Surrey, and he believed that the system of Tenant-Right in the county and neighbourhood was satisfactory to both parties. They had most able valuers, and, on the whole, he was bound to say that they carried out the system as well as it could be carried out. He hoped that on that point they all felt as he did. He had come there to learn, and he was very much pleased that he had come. It was a good place for a landlord to come to, because he heard what was said about the conduct of landlords, and he hoped there were several gentlemen in the room who felt that it was of the greatest advantage to have these matters discussed. The more the subject was ventilated the sooner they would arrive at the truth. It was not of the slightest use, he was quite satisfied, to apply to Parliament in any sort of way, and for this reason, that the custom of Tenant-Right was so different all over the country that for Parliament to establish any uniform practice was a task impossible of accomplishment. He only wished now to state that if any gentleman not already a member wished to enrol his name the secretary would be ready to receive it. Respecting the remarks made by Mr. Butler anybody who looked at him would see at a glance that he was no coward. He took his (Lord Galway's) horse when he was a little fellow, and he had spoken about making good roads to his farm; but Mr. Butler, he hoped, gained compensation in horseflesh, for it was a known truth that any man making a good road where there was a bad one, gained a great deal in horseflesh.

A vote of thanks to Mr. Huskinson was carried by acclamation.

Mr. WALKER, Mattersea, moved: "That in the opinion of this meeting the present system of local taxation is unjust and ought to be amended, inasmuch as most of the objects for which it is imposed, such as the maintenance of the poor, and the lunatics, the administration of justice, the preservation of public order, the punishment of criminals, &c., are of national and not merely local importance, and are for the benefit of all classes; that, therefore, all kinds of property ought to contribute to them, whereas at present, with few exceptions, real property alone is taxed, and personal property is exempt from these burdens."

Mr. STORER seconded the motion, which was carried.

THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

The April monthly meeting of the directors was held in Edinburgh. Present: The Marquis of Tweeddale, K.T., president, in the chair; Admiral Sir William J. Hope Johnstone, K.C.B.; Mr. Binnie, Seton Mains; Mr. Graham Binney, W.S.; Mr. Hew Crichton, S.S.C.; Mr. Curror, The Lee; Captain Maitland Dougall, of Scotseraig, R.N.; Mr. Elliott Hindhope; Mr. Ford, Hardengreen; Mr. Gillon, of Wallhouse; Mr. Hunter, of Thurston; Mr. George Auldjo Jamieson, C.A.; Mr. Elliott Lockhart, of Borthwickbrae; Mr. Whyte Melville, of Bennochy; Mr. Mitchell, Alloa; Mr. Munro, Fairington; Mr. Newton, of Linnbank; Captain Tod, of Howden; Mr. Walker, of Bowland; Professor Wilson; Mr. Young, of Cleish; Mr. Young, Keir Mains.

The following report was submitted: Report by the Special Committee appointed by the Highland and Agricultural Society of Scotland to consider the improvement of the cultivation of land, so as to increase the produce of human as well as of animal food.

At the directors' meeting, on the 1st of February, 1871, the secretary read the following proposal by the Marquis of Tweeddale to form a committee on the general improvement of land in Scotland: "In consequence of being so often asked, I have brought the subject before the directors. I have for many years thought that the improvement in breeding cattle, sheep, pigs, &c., had reached its climax of perfection; and though I would not desire to see our prizes for stock

discontinued, it appears to me that there is a question of greater importance to the public which should occupy the attention of the Highland Society—viz., the improvement of the cultivation of land, so as to increase the produce of human as well as of animal food. I make this proposition, as I believe from experience that the land of second and third quality is capable of a very great improvement, at a much less expense than farmers imagine were they possessed of the means applied by the most experienced in carrying out successfully the contemplated improvement. It is in the hope of accomplishing this object that I am induced to propose to the board to form a committee in order to report how they would recommend it to be accomplished. The proposal being approved of, the following gentlemen were appointed: "The Marquis of Tweeddale; Mr. Dickson, of Corstorphine; Mr. Smith, Whittingham; Mr. Swinton, Holywell Bank; Mr. Young, Keir Mans; Mr. Elliot, Lighthow; Mr. Stephens, Redbrae; Mr. Mitchell, Alloa; Mr. Hunter, of Thurston—The Marquis of Tweeddale, convener. The committee thus appointed held their first meeting on the 15th of February, 1871, when all the members were present, with the exception of Mr. Young, from whom a letter was read stating his inability to act on the committee. At this meeting the Marquis of Tweeddale reported that he had prepared a memorandum of his own views of the subject, which he read to the committee, at the same time stating that he wished the committee distinctly to understand that he did so in the hope of having the subject discussed, and that he would be glad that each member of the committee should state his own views in the same manner. The memorandum prepared by the Marquis is as follows: "The question for the consideration of the committee, and which has been remitted to them by the directors is, 'The improvement of the cultivation of the land so as to increase the produce of human as well as of animal food.' And the committee are asked to report how they would recommend the Highland Society to act so as to accomplish this object. In bringing this subject before the directors, I had principally in view of those portions of the land which may be reckoned as of second or third quality, as I have had large experience of this class of land, and of the improvements which can be effected on it. The directors have not restricted the inquiry of the committee to any particular class of land, so that the whole subject is now before us. I know that several members of the committee have had great experience in the improvement of land, and I hope we may be able to make some practical and useful suggestions for the guidance of the Society on this important subject. I shall be glad to hear any gentleman express his views, and in the meantime I would wish to bring under notice of the committee the system of management which I have followed on farms in my own occupation, large portions of which are land of inferior quality. I would refer the committee to a statement furnished by me to the special committee of the Highland Society appointed to report on steam cultivation in East Lothian, and which is printed in their report. This statement gives a detailed account of the improvements by draining, and deep and subsoil ploughing, carried out by me, and of the expense of deep ploughing; and it also contains an account of the operations necessary to prepare the land for the various crops of corn and turnips. I have managed these farms according to the five-shift course of husbandry, which I consider is best adapted for land of secondary and inferior quality. The deep ploughing which I practise is essentially necessary for the proper cultivation of this class of land. The ploughing must only be done when the land is dry and in good order for ploughing. For the turnip crop, farmyard manure should be applied at the rate of not less than twenty cartloads per acre, with an addition of 6 cwt. per acre of portable manure consisting of a mixture of equal parts of Peruvian guano, phosphatic guano, and dissolved bones, or some similar mixture, sown broadcast in the drills, and increasing the quantity of portable manure if there is no farmyard dung or other bulky manure cannot be got to take its place. Such manuring will grow a fair crop of turnips on land treated as I have described; and they will not suffer from drought or excess of moisture, as in shallow-ploughed land, which I attribute to the deep ploughing in autumn, and not requiring to plough the land in spring. One-half of the turnip crop may be carted off to be consumed by cattle in the courtyards, the other half of the crop being eaten on the ground by sheep. After the turnip crop is

removed, and the land is in proper order, it should be ploughed to the depth of from seven to eight inches, and sown in the spring with barley and grass seeds. The land should lie in grass and be pastured by sheep and cattle. Hay should not be grown on land of an inferior quality. As a means of further increasing the fertility of the soil, all the feeding sheep on the grass should have a liberal allowance of oleaginous cake. The additional price got for the sheep will fully repay the cost of the cake, and the effect on the grass and the succeeding crop of oats is very marked. Lime should be applied on the grass land before it is broken up for oats, at the rate of from five to ten tons per acre, according to the nature of the soil. This will not require to be repeated for at least fifteen years. The seed furrow for the oat crop need not exceed seven inches deep. After the removal of the oat crop the land should be ploughed in autumn not less than fourteen inches deep, and as much more as possible. It should lie all winter in this state, and be prepared for the turnip crop in the manner described in the statement before referred to. I have for many years practised the treatment of land which I have detailed. I consider the cost of doing so quite within the means of a tenant of ordinary capital, excepting the drainage, which should be done with the help of the landlord. There may appear to you, gentlemen, nothing new in that mode of treatment; but from long experience and observation, I am so satisfied that the profitable management of this sort of land is not generally understood and practised throughout the country, that I have thought it right to bring the method before you, and I have to invite your criticisms upon it. Since I gave in the statement to the committee on steam cultivation before referred to, I have had further experience of the effect of deep cultivation on the farm of Newhall referred to in that statement, and to show you the increase of the crop and stock on that farm I give you a comparison between crop 1864, the first crop which I reaped, and crop 1869, the first crop of the second rotation, when the same fields were in the same crop in both years: 1864—Wheat, 98 qrs.; barley, 118; total, 216. 1869—Barley, 372; increase, 156 qrs. 1864—Oats, 286. 1869—Ditto, 384; increase, 98 qrs. 1864—Cattle fed, 24. 1869—Ditto, 29; increase, 5. 1864—Sheep fed off on grass, 173; ditto on turnips, 200; total, 373. 1869—Sheep fed off on grass, 274; 80 ewes and 111 lambs (regular flock), 191; sheep fed on turnips, 278; total, 743; increase, 370. I have not personally reclaimed any land from its natural state of pasture; but after making considerable inquiry as to the system pursued by farmers of experience in such matters, I have laid down rules for the guidance of my tenants in breaking up and improving moorland, and which are embodied in their leases. I will read you a copy of these conditions. You will observe that the object of breaking up this moorland is to improve the pasture, and not for the purpose of growing grain. I find that my tenants readily acquiesce in these conditions, and a considerable extent of moorland has been reclaimed under them. I have now stated to you my experience in the cultivation of land; and as some of you may hold the same or different views on the subject, we shall be glad to hear any remarks or observations which you have to make. I have not suggested any form of report by the committee, as I should like to have the subject fully discussed and your opinions fully expressed, so that all the information possible may be before the committee previous to their making their report.

"CONDITION AS TO BREAKING-UP AND CROPPING NEW LAND.—Further, with respect to the remaining lands of said farm which are at present unenclosed, and in natural pasture, the said _____ shall have power to break up and cultivate the same on the following conditions—*videlicet*, he shall be bound, in the first place, not in any one year to break up more than _____ imperial acres, and shall observe the following rules for the cultivation and management of such land: Before being broken up and ploughed the land should be tile-drained where necessary, and shall lie fallow the year after having been ploughed, and during that season, and previous to being sown for a crop, lime shall be applied at the rate of not less than six tons per imperial acre; on the succeeding year a white crop may be taken, to be followed by turnips to be consumed on the ground by sheep. And on the fourth year, after being so broken up, the land, having been properly ploughed and tilled after turnips, shall be sown down alone or with other crop to grass with not less than twelve pounds of clover and one bushel of pereu-

nial ryegrass per imperial acre, and shall remain in grass and be pastured for at least three years; subsequently, the following course and rotation of cropping shall be pursued—*videlicet*, on the first year, when ploughed up from grass, a grain crop may be taken; on the second year, turnips to be consumed on the ground by sheep; on the third year, to be properly tilled and sown out to grass as before without other crop; on the fourth and fifth years, grass. And it is expressly agreed that not more than imperial acres of such land, after being so brought into cultivation as aforesaid, shall be broken up from grass in any one year." After some discussion as to how the committee should take action, it was resolved that a copy of the Marquis's memorandum should be sent to each member of committee for consideration, and that the meeting should be adjourned till a future day, by which time it was hoped that each member would be prepared with his own views in writing of the best mode of improving land, and of the course to be recommended to the directors. The committee held a second meeting on the 25th of October, 1871, when a letter was read from Mr. Hunter, of Thurston, stating that he quite agreed in the Marquis of Tweeddale's memorandum, but he thought that before the committee could recommend to the farmers of Scotland to try and carry out improvements on such a scale, it would be necessary that the committee should obtain from his lordship an account of the expense he has been at in making the improvements and obtaining the increase on corn crops, as well as the extra crops for the keeping of cattle and sheep. Unless this can be obtained and the committee thereby enabled to show to the farmers that the improvements can be effected by a reasonable outlay, and likely to be repaid to them during their leases, Mr. Hunter was of opinion that the committee would not be authorised to encourage them or hold out inducements to them to try the improvements. A letter and statement were then submitted from Mr. Elliott, Laighwood, who was unable to attend the meeting. Mr. Smith, Whittingham, with reference to Mr. Hunter's remarks, thought it was quite unnecessary to have accounts of income and expenditure from the Marquis, being quite satisfied with the increased agricultural returns. He considered it very desirable, but did not see how a scheme could be laid down for the improvement of land throughout Scotland, or even in a single county. Mr. Mitchell, Alloa, stated that he had not prepared a paper on the subject, as he would never advise any tenant to reclaim second-rate land. He had done so himself at a considerable expense on land of a moorish soil, but it would not repay him even under a thirty years' lease. He was of opinion that the work should be performed by the landlord, and not by the tenant. The Marquis said he had given his system as an example, and expressed a wish to have a statement from Mr. Mitchell, in order to see how the land had been managed. After a general conversation, it was resolved to print the statement by Mr. Elliott, and circulate it among the members of the committee, and to adjourn the meeting till a day convenient for the chairman. The statement by Mr. Elliott is as follows: In the memorandum read by the Marquis of Tweeddale to the committee, his Lordship says, "The question for the consideration of the committee, and which has been remitted to them by the directors, is the improvement of the cultivation of the land, so as to increase the produce of human as well as animal food." The importance of this question, if its solution leads to a practical result, cannot easily be overrated; the wealth and population of this country is rapidly increasing, while the acreage of the land capable of producing food is stationary. No doubt the wide field opened up by the removal of all duties on grain and stock for a time relieved all pressure upon the food of the country; but the natural tendency in a country like this is, that the population will ever press upon the means of subsistence, and already the high price of all kinds of butcher meat shows that this pressure has already commenced. Whatever, therefore, can point out any means whereby land can be profitably improved, so as to increase human and animal food will be a national benefit; but I hope in this I shall not be misunderstood, because, excepting the improvement be profitable, it is no national advantage; in other words, if the improvement costs 25s., and the produce reaped 20s., instead of a national gain it is a national loss. The Marquis in his memorandum states further, that in bringing this subject before the directors he had principally in view those portions of the land which may be reckoned as of second or third-rate qua-

lity. Keeping this in view, the question of the improvement of this kind of land, in my opinion, must be considered in two different ways—(1) as regards the improvement having been effected by the landowner; and (2) when effected by a tenant occupying under a lease not exceeding nineteen years. In the first case the landowner may reap ample profit by the increase in the fee-simple value of the land after improvement; but in the second case the tenant must reap his outlay and profit during the currency of his lease, or at least before its expiry; and if this cannot be made clear, it will be in vain to look for extensive improvement of this kind of land occupied by tenants on lease under ordinary conditions. It may be unnecessary here to consider the first case—that of improvement by the landowner cultivating his own land—as there can be little doubt that there are extensive tracts of second and even third rate land in the country which could be improved profitably in the way and manner pointed out by the Marquis, if the permanent increase in the value of the land caused by the improvement be taken into account. Unfortunately, however, it is feared improvements upon an extensive scale need not be looked for in this direction, as past experience has shown that landowners as a class are not profitable improvers of land. I will therefore confine any observations I make to the second class alluded to—tenants occupying their farms under lease; and on this there are many considerations which do not affect improvement effected by the landowner. 1st. It will be necessary to consider what is meant or commonly understood by the term second and third rate land. Second and third rate land in one district might be good land in another, so much depends upon elevation, climate, situation, and subsoil. A retentive subsoil in a dry early climate like the Lothians is a different thing from the same subsoil in a wet cold district. There are many tracts of third-rate land in the upper districts of Lanarkshire and Ayrshire which would not be considered third rate if situated in a climate like the Lothians. In the one case a tenant might lose money by expending it on the improvement of this third-rate land, and in the other be amply repaid for his outlay. In fact, so various and unequal is the climate of this country that there are many wet cold districts in which it is barely profitable to keep in cultivation even the best land in it. Consequently, it would be folly to improve for cultivation the second and third rate land in these districts. The climate, elevation, situation as to markets, and many other things, must be taken into account. 2nd. Much will depend upon the description of farm upon which the improvement is contemplated. If two-thirds of the farm be good land, capable of growing all kinds of crop, and one-third second and third rate land, it may be profitable for a tenant while he continues to cultivate the good land as heretofore, to improve the other third, or inferior land, even at great outlay; but the case may be very different were the whole, or nearly the whole, of the farm second or third rate land, without any first-class mixed with it. In the first case he could bring his horse and staff of workpeople from the good land to assist when necessary in the improvement of the inferior, and this at comparatively small expense. In the other case, he would require to keep an expensive staff, horses, workpeople, everything for the breaking up and improving of the land, which for some years would only yield a small return. The consequent cost or necessary outlay would therefore be so great that few, if any, tenants would be found with sufficient capital and spirit to undertake the improvement of such a farm. This would be the case, even supposing the tenant had full confidence in his being in the end repaid, but much more so when he found his disbursements far exceeding his receipts, and filled at the same time with grave doubts as to his being able ultimately to reap not only his outlay, but the interest on the capital expended. 3rd. As a great portion even of the first-rate land in the country could be greatly improved by judicious outlay in the form of manuring, liming, &c., a farmer occupying a farm on which there is both good and bad land will in general feel much more inclined to expend his money on the improvement of the good land rather than on the inferior, the return from money expended on good land being in general much more speedy than from inferior. This also tends to retard the improvement of second and third-rate land by tenants, few having capital sufficient, even if they had the will, to improve the whole of the farm at the same time. 4th. Hitherto I have only spoken of the difficulties in the way of finding tenants occupying their farms under the

ordinary conditions of lease, who would be willing to enter on the improvement of second or third-rate land upon an extensive scale, and am satisfied that for the purpose of encouraging or inducing a tenant to do so the landlord must be ready and willing to go hand in hand with him in many of the operations, and this the landlord should have no hesitation in doing, seeing that the value of the land will be permanently increased. As most of second and third-rate land is wet, wherever it is so it should be drained at the expense of the landlord, on the cost of which he should charge the tenant five per cent., the tenant over and above performing all necessary carriages free. Further, as nearly all land cultivated in the common way, when drained and ploughed deeper than formerly, must be limed, and considering that lime applied in a considerable quantity, say five tons per acre, benefits the land for many years, the landlord should pay a portion of the cost of the lime, the proportion depending upon the number of years in the lease unexpired when the lime was applied. In many other ways, however, the landlord should go hand in hand with the tenant in any extensive permanent improvement of second or third-rate land, otherwise to induce him to do so the tenant would require to be reimbursed at the end of his lease for some portion of the permanent improvement effected by him during its currency. 5th. Excepting liberal covenants be entered into, so that the landlord and tenant may go hand in hand, the landlord bearing his fair share of the outlay necessary to improve the land permanently, while the tenant pays all the annual labour and expense required and a share of the permanent improvement also, such as all carriages, &c., I cannot see my way to recommend tenants on ordinary leases to enter into wholesale improvement of second and third-rate land in the way and manner, and at the cost, laid down and explained by the Marquis, or to be able to state that, in my opinion, if they did so, that they would have anything like a certainty of being repaid their outlay. In the event, however, of the landlord and tenant going hand in hand to the work, I have a very different opinion. Large tracts of second and third-rate land might be improved in this way with mutual benefit to landlord and tenant; and if so, few will doubt the great national advantage arising from it, inasmuch that we might go far to feed our population with produce raised from our own soil, and in doing so with profit alike to the owner and the occupier. 6th. As this, however, is a great national question, and one of vast importance; and considering that there are extensive tracts of second and third-rate land in all parts of the country capable of great improvement, and which might be profitably improved if landlord and tenant went hand in hand, I would suggest that the Highland Society should offer annually, in the same way they do at present as regards the improvement of waste land, a premium for an approved report by a tenant-farmer on the improvement of second or third-rate land effected within the last three years, profitably or unprofitably—the report to embrace conditions of lease on the point, cost of improvement, and mode and manner of effecting it. The attention of the reporter might be specially called to the description of improvement effected on such a large scale by the Marquis of Tweeddale. In speaking here, however, of the possible advantage likely to be derived from the Highland Society offering a premium annually for an approved report upon the improvement of other than waste land, I do not think it would be right to pass over a remark made by the Marquis of Tweeddale in his letter to the Directors of the Society, recommending the consideration of this subject, which resulted in the formation of this Committee. The noble Marquis says: "I have for many years thought that the improvement in breeding cattle, sheep, pigs, &c., had reached its climax of perfection;" and although possessed of this opinion, the Marquis does not ask the Society to discontinue the prizes offered for stock. He considers this question to be of greater importance to the public. Now, while I also consider this question to be one of great importance, if its consideration should lead to any practical result, I consider it right to say that, interested as I am in the welfare of the Highland Society, I hope and trust it will never be led to discontinue to offer prizes annually for stock, even although the opinion may become general that the breeds of the different animals have reached the climax of perfection—an opinion, however, which I do not share, as I consider one of the chief benefits to be derived from the labours of the Society will ever be that of

drawing together all classes of people annually in the show-yard, when agriculturists from every land can meet, and thereby assist agriculture in its onward progress; and this, in my opinion, can best be effected by the exhibition in the show-yard not only of the best specimens of the different breeds of stock, enticed there by the prizes and hope of distinction offered, but by bringing forward at the same time all manner of agricultural implements. The society should keep in mind that, even if the animals exhibited have arrived at perfection, that the possessors of them are comparatively few in number, and that in every show-yard there are thousands interested, who, having at home no such perfect animals, are greatly benefited by being allowed the opportunity of seeing them. I am convinced, however, that if the annual exhibition of stock and implements be discontinued, that the interest taken by the public in the proceedings of the society will cease, and that the society afterwards will find difficulty in hanging together. Reports, essays, and articles on agriculture in all its branches are good, but they should be continued in combination with the annual exhibition in the show-yard." The committee held a third meeting on the 27th of March last, when the following remarks on Mr. Elliot's statement by the Marquis of Tweeddale were read:—"The question remitted to the committee is—'The improvement of the cultivation of the land, so as to increase the produce of human as well as animal food'—and the committee desired each member to be prepared with his own views in writing of the best mode of improving land, and of the course to be recommended to the directors.' Mr. Elliot has not informed the committee what he considers to be the best mode of improving land, although it is understood that he has had great experience in the reclaiming of moorland and land of inferior quality. Mr. Elliot says that the question must be considered in two different ways—1st, As regards improvements effected by a landowner: and 2d, Improvements effected by a tenant occupying under a nineteen years' lease. It is not remitted to the committee to say who should improve the land; it is the best method of doing so, so as to increase its produce; and if land which was previously producing almost nothing can be made to grow good crops of grain or grass, that is surely a national gain, whether it may have been profitable to the cultivation of the soil or not. Mr. Elliot seems to have little doubt but that the fee simple value of the land can be increased by improvement, it might therefore be left to the landlord and tenant to make their own arrangements as to how this is to be done. Mr. Elliot remarks that landlords as a class are not profitable improvers of land. This may or may not be true; but the information which the committee may give them will tend to their instruction on this matter. Mr. Elliot then discusses the question of improvements made by a tenant farming under a lease, and divides the subject into heads. Under the first head, he remarks on the different classes of lands in different districts. I have to observe the land must be classed in the district in which it is situated, and not compared with any other district; the land of Lanark or Ayr shires cannot be transferred to East Lothian, nor can the East Lothian climate be had there, and a different mode of improving the land may be necessary. I only gave a description of what I had done to improve my own land in East Lothian. I do not say that my plan is suited for all sorts of soil or for every district of Scotland. It would certainly not be profitable to keep land in cultivation in wet and cold districts of the country; but nevertheless this land may be capable of great improvement as pasture. Under the second head, Mr. Elliot says that a farmer possessing a farm of good land can more easily improve any inferior land which may be on the farm than if the farm were wholly inferior land. This is quite true, but much depends on the conditions of the lease. Under the third head, Mr. Elliot says that there is a great portion of first-rate land in the country which could be greatly improved, and that tenants prefer expending their money on good land. This is also true, but it is no reason why the committee should not endeavour to ascertain and report upon the best modes of improving inferior land. Under the fourth head, Mr. Elliot says that the landlord and tenant should go hand-in-hand in improving inferior land. This is quite right, so far as building houses, draining, fencing, or trenching is necessary. As to liming land, this is not so clearly a landlord's business, as the benefit of lime, though great, is not a permanent improvement. Under the fifth head, I remark again

that it is not in the remit to the committee to point out whether the landlord or tenant of the land should be at the expense of improving it—it is the best method of treating the soil which the committee must find out. Under the sixth head, Mr Elliot recommends that the Highland Society should offer a premium for an improved report by a tenant-farmer on the improvement of second and third-rate land effected within the last three years. The great objection to such reports is that the statements made in them are too often mere assertions of the writer, and there is no means of checking their accuracy. The journals of the Highland Society for the last twenty years have contained numerous reports on the improvement of land, but from the conflicting statements made in these reports, it appears to me that the public pay little or no attention to them. It would be far better if anyone who is carrying out improvements would enter his farm for competition, so that the work might be periodically inspected on behalf of the society. A report on improvements carried on under such inspection would bear some weight."

A general conversation then ensued, after which the Marquis of Tweeddale said that when he first brought this subject under the notice of the directors and proposed the appointment of the committee he hoped the committee would obtain information on the different methods of improving inferior land, and would report on these to the directors; but as the information procured is limited, he therefore proposed that this committee report that in their opinion the Highland Society should offer premiums for the best conducted series of operations for the improvement of second and third rate

land carried out under the inspection of a committee of the society. The suggestion by the Marquis of Tweeddale was approved of by the committee, who resolved to recommend it for the adoption of the board. A letter was read from Mr. Elliot, Lighthood, regretting that he had been prevented attending the last meeting of the Land Improvement Committee, and stating: "The remarks you send me, made by the Marquis upon my statement, are made chiefly from this—The committee desired each member to be prepared with his own views in writing, of the modes of improving land,' &c. I never understood this before, or that it was expected the members of committee should reduce to writing the practical mode he would recommend of improving second or third rate land. My idea was that each member was requested to put down in writing his opinion of whether second or third rate land could be improved profitably so as to increase the produce of human as well as animal food, and in giving my opinion I kept in view the way and manner it could be improved by the landlord, the tenant, or both united, thinking that until it was decided whether it could be profitably done or not it was needless to point out or lay down the practical details of improvement." The board approved of the suggestion contained in the report, that the society should offer premiums for the best conducted series of operations for the improvement of second and third rate land carried out under the inspection of a committee of the society, and it was remitted back to the Land Improvement Committee to prepare the terms in which the premiums should be announced.

THE ROYAL DUBLIN SOCIETY.

SPRING STOCK SHOW.

The Royal Dublin Society has held its forty-second spring show of breeding and fat cattle, implements, and machinery. This show has a character peculiar to itself, being fixed and stationary, while the great English, Irish, and Scotch breeding shows are migratory; and being held in the spring, when young breeding stock, particularly yearling Shorthorn bulls, are in demand, this has assumed the character of an extensive mart for the sale and purchase of yearling Shorthorn bulls. At this meeting there were 136 yearling Shorthorn bulls, over which the sales were rapid and numerous, and the prices high. Some years since English and Scotch first-class breeders visited and sent over some of their prime animals for sale, but they have abandoned this meeting for some time as exhibitors; and now purchasers, from both sides across Channel, as well as from Australia, Canada, and the United States of America, are frequently seen here. The Booth blood is to be found in almost every county in Ireland, evidence of which is to be noted at all the fairs and markets in the vast improvement effected in farmers' stock, numbers of whom buy at these annual shows yearling Shorthorn bulls at high prices to serve their dairy-cows, the calves being now reared, instead of as heretofore being slaughtered as soon as dropped. It is to be regretted that the names of some of the most noted Irish breeders are not to be found in the list of exhibitors, caused by the demise of some, and the consequent dispersion of their herds; while others also find it less troublesome, and possibly more profitable to sell their extra produce by annual auctions, and thus the meeting is shorn of the most prominent breeders, and their best specimens. However, new and younger men are coming forward in spirited emulation, so that there is no fear as to the continuous supply of young Shorthorn stock; but there is unquestionably a falling-off in older animals, and also in the female sections. The passing away of the Chaloner, late

Towneley, Plate, from the Shorthorns to Mr. Peake's fine Devon bull, is proof enough of this; and a great victory for the red coats.

The yearling shorthorn bull section contained 136 entries, some of which from sales effected since the entries were made and other causes, were not brought forward, among which were the prize calves of the Bellsbridge Royal. In such a number, there were, no doubt, a few that were not all that could be desired, but the good ones were numerous, and so the judges, Messrs. Joseph Stratton, Robert Jefferson, and Jacob Wilson, found it, for it took them about three hours to weed out and come to a final decision, when the Messrs. Christy, Fort Union, Adare, who exhibited no less than nine in this section, was placed at the head of the list for his white bull, Jack Frost, bred by E. J. Smith, Islandmore by Lictor (24333), dam Recherche, both famous in the prize ring; he possesses great substance for his age, is a fine level-topped bull; crops good, ribs well sprung, with full chest, short legs, and altogether very symmetrical. P. W. Low, Kilsbane, Tipperary was put second for Czarowitz by Wide-awake (27505), out of Dagnar the 2nd; he is a handsome roan, standing square and level, and covered with plenty of soft hair, but a thought not full enough in the twist. Mr. Low, who had three other good animals, also took third honour for Red Knight by the same bull, out of Limerick Lass 3rd; he is possessed of great substance, his profile is very symmetrical, and of the two he is a more taking animal than Czarowitz. The Earl of Carrick owns King Arthur, which stands fourth on the list, by Prince Arthur (29598), out of Juliet, is a handsome red-and-white upstanding bull, with nice crops, back and loins, good ends and middle piece. Messrs. Christy take fifth place for Troubadour, a handsome roan, also from E. J. Smith's herd, by The Earl (27623), from the Chaloner herd, out of Truelove 2nd. There were four high commends in this section, viz., Hon.

L. H. King, Harman's Patriot, the Misses Connolly's King Bee, R. Chaloner's Larry the Lad, and F. W. Low's Forrester. The commendations were, R. C. Cosby's The Robber, Captain H. Butler's roan bull, not named, but of a good sort, and N. M. Archdall's Hamlet, which was exhibited with five others from the same herd, one of which, St. Patrick, was a very taking, even, and symmetrical roan.

Of two year's old bulls there were 36 entries, the best being P. Sinnott's roan, Knight of the Cross; he comes of a good sort, being by Charlie (25745), out of an Agamemnon dam; he is a fine topped bull, neat, and level, both over and under, but somewhat light from the crops down the shoulders, still he promises well for a year older. Mr. Downing, Ashfield, Fermoy, who has been some years at work, getting up a first-class herd, was put second for Victorious, a neat symmetrical roan, by Winter King (25462), out of Vestal Queen; and N. M. Archdall, third, for Ulster, a red-and-white bull, by Abercorn, out of Jenny Lind 4th, a strong serviceable bull. George Low, Burghtown, Kildare, got the H. C. for Escape; and commendations were given to John Radeliff's Rufus by Dey of Algiers, and R. C. Cosby's Sir Gilead by Colonel Franks.

There were twenty-seven entries of aged bulls, which after the usual process of weeding gave the judges some trouble in selecting the leader, not from their excellence, but the contrary; for although they were all well-bred they exhibited much coarseness and want of condition; while after a great deal of time, Mr. Meadows' Prince Mason (29645) by Prince of the Realm (22627), out of Blossom the Fifth, though sadly out of condition and badly haired, could not be passed over, and was put first: he was the second bull in the two-year-old section last year, and is a serviceable, upstanding, well-formed bull. Major O'Reilly's King Richard the Second came in second. He is from the late Colonel Leslie's herd, got by King Richard (26525), out of Rosalia, and a goodish bull, and well covered with hair; though this was old, and easily came away. W. A. Barnes, Westand, hitherto the stronghold of the Booth blood in Ireland, during his father's lifetime, is fast getting up a new herd, and takes third place for Prince Arthur Patrick, a roan, from R. W. Reynell's herd, by Royal Prince, out of Little Queen, and a very fair specimen of Shorthorn breeding. High commendations were awarded Messrs. Christy for Backwoodsman (21203), a fine old fellow, now eight years old, bred by the late Captain Ball, still good and serviceable, though getting a little patchy; W. Johnson's Prince of Rocklands, from the famous Grace Dieu herd; J. Gumbleton's Earl of Courtown, from the Bolton herd, which was the third two-year-old this time last year; and R. F. Russell's Duke Bertram, from P. J. Kearney's herd. W. Ison Bryan was commended for Charlemagne, from Mr. Meadows' herd.

The yearling heifers numbered but thirteen; while last year there were twenty-four; and beyond the reduction in numbers there was a visible falling off for the most part in quality and condition, although the breeding was faultless. That Ireland possesses better there is no doubt; but breeders do not like preparing their best young females for show purposes, and they are wise in not doing so, as there cannot now be a doubt that it injures their breeding capacity, and at no very distant day we are likely to have none but bulls and cows at our Shows. Mr. Meadows in this section takes the lead with Fanny the Thirty-third by Prince of the Realm (22627), out of Fanny the Fourteenth, a long and successful pedigree. She is rather plain-looking, but still a substantial well-built red-and-white heifer, and will fine down. Messrs. Christy comes in next for Queen of Beauty the Sixth by

Fairy King (21716), out of Queen of Beauty the Fourth, a beautiful white, possessed of great sweetness and symmetry. She should have been first, and there is little doubt of her having been so, but from being a little tender in the fore-feet. H. Lyons, Croome House, was third for Dove, a handsome roan, which was first as a calf at Ballsbridge Royal last year. She is by Lord Francis (26,630), out of Darling by Victor. Mr. Meadows had in this section a very sweet roan heifer Medora, with good flanks, crops and back, by Peer of the Realm, out of Graceful, which was placed fourth. The commendations were W. Bolton's Woodbine the Eleventh, and the Hon. Jno. Messy's Rose, and Bracelet, both by Knight of the Garter (26548).

In the two-year-old heifer section there were but four entries. Earl Fitzwilliam, Coollatin Park, co. Wicklow, was placed first for Ingot by Lord of the Isles (26076), out of Indiana by Fusilier, much improved since she was shown at Ballsbridge Royal last year. The second place was given to Fitzmaurice Bloomsfield's Lady Jocelyn, from Sir Robert Paul's herd.

The Shorthorn cows numbered but five, W. Dunlop-Monasterboice, deservedly taking the first place for his fine five-year-old, Snowdrop, by Mountbank (24626), out of Beauty by Downshire; is a large massive cow of great substance, and symmetrical proportions. Jas. Smith stood second for Miss Matilda by Prince Arthur, out of Lady Alice the Third; she was first last year and second in 1870, a great beauty, and every inch a Shorthorn. The third went to Colonel Kane Bunbury, Moyle, Carlow, for Victoria by Prince Arthur, out of Fanny Chaloner the Fifth; and W. Dunlop had a commend for his roan cow Perfection.

THE MISCELLANEOUS BREEDS.—From the paucity of the numbers exhibited in the sections other than Shorthorns, owing to the miserable prizes offered, it is scarcely worth while to keep sections open for any other sorts beyond the native Kerrics.

THE HEREFORDS numbered one yearling, for which R. W. Reynell gets the prize; three two-year-olds and two aged bulls, one yearling and one two-year-old heifer, for which P. J. Kearney gets the prizes; two three-year-old heifers, for one of which G. N. Purdon, Killuean, takes the prize; and two aged cows, for one of which P. J. Kearney gets the prize.

POOLED ANGUS CATTLE.—There were four bulls and six heifers and cows, for which Wm. Owen, Blesinton, takes the several premiums.

THE DEVONS numbered but five yearling bulls, one aged bull, Blood Royal, a heifer and cow, with all of which John Peake takes the prizes, and the Chaloner cup for being the best bull of any breed over two and under six years old at the Show, with Blood Royal, a capital specimen of the Devon.

OF KERRIES there were seven bulls, twenty heifers, and ten cows. The prizes for the bulls, of trifling money value, went, the first to C. B. Marlay, and the second to Andrew McCullagh. The prize for two-year-old heifers, being a silver medal, went to E. Purdon; the single money prize for the three-year-old heifers, in calf or milk, went to Capt. Bayley; and the two money prizes, for cows in calf or milk, went to the same gentleman.

OF WEST HIGHLANDERS there was one bull, one heifer, and one cow. T. Butler takes the medal for the bull, and Col. Sir John S. Robinson the medal for the heifer and a £2 prize for the cow.

OF AYRSHIRES, that once made up a good entry at these Shows, there were but a bull, a heifer, and a cow, all belonging to G. A. Stephenson, who takes the money prizes.

OF ALDERNEY CATTLE there were 1 yearling and 3

aged bulls, 2 heifers, and 2 cows: G. J. Wardell, Colonel Sir John Robiuson, and Geo. Dingwell dividing the prizes.

FAT CATTLE.

The fat cattle made a magnificent display, numbering altogether in the several sections 53 animals. The following is a list of the prizes:

Shorthorn Ox calved in 1869.—First prize, Major H. L. Barton, Straffan House, Straffan, for Shorthorn fat ox. Commended: B. P. Fitzpatrick, Newlands, Naas, for Shorthorn ox.

Shorthorn Ox calved before 1869.—First prize, O'Connell L. Murphy, Breemount House, Trim, for Shorthorn pure white ox. Highly commended: Richard Walsh, Kingswood, Saggard, for Shorthorn bullock.

Shorthorn Cow of any age.—First prize, Hon. John Massy, Milford House, Limerick, for "Dolly"; second, O'Connell L. Murphy, Breemount House, Trim, for Shorthorn red and white cow. Commended: O'Connell L. Murphy, for Shorthorn cow.

Shorthorn Heifer not exceeding four years old.—First prize, William Stawell Garnett, Williamstown, county Meath, for "The Angel"; second, O'Connell L. Murphy, Trim, for Shorthorn roan heifer.

Polled Angus Ox calved before 1869.—First prize, John Lett Sealy, Ballykelly, Wexford, for polled Angus fat ox.

Devon Cow of any age.—First prize, George A. Rotherham, Kilbride, Tuam, county Meath, for "Pansey"; second, Thomas Butler, Priestown House, Priestown, county Meath.

Kerry Ox calved before 1869.—First prize, Samuel Garnett, Arch Hall, for Kerry ox.

Kerry Heifer not exceeding four years old.—First prize, Samuel Garnett, Arch Hall, for a Kerry heifer; second, George Nugent Purdon, Lisnabin, for a fat Kerry heifer. Commended: S. Garnett, for a Kerry heifer.

West Highland Ox calved before 1869.—First prize, Samuel Garnett, Arch Hall, Navan, for West Highland ox.

West Highland Cow of any age.—First prize, Thomas Butler, Priestown House, Priestown, county Meath, for fat West Highland cow; second, Thomas Butler, for fat West Highland Cow.

West Highland Heifer not exceeding four years old.—First prize, Thomas Butler, Priestown House, Priestown, county Meath, for fat West Highland heifer.

Ox of any other pure or cross breed not included in the foregoing sections, calved in 1870.—First prize, Richard W. Reynell, Killynau, Killucan, for half-bred Kerry.

Ox of any other pure or cross breed not included in the foregoing section, calved in or prior to 1870.—First prize, P. J. Kearney, Milltown House, Clonmellon, Kells, for cross bred fat ox; second, Major H. L. Barton, Straffan House, Straffan, for cross bred fat ox. Highly commended: Samuel Garnett, Arch Hall, Navan, for half-bred crepey ox.

Cow of any pure or cross breed not included in the foregoing sections, calved in or prior to 1870.—First prize, O'Connell L. Murphy, Breemount House, Trim, for Shorthorn roan cow. Highly commended: Sir Allen Walsh, Ballykilcavan, Stradbally, for fat cow; commended, M. Curtis, Flemingstown, Naul, for half-bred red cow.

Heifer of any other pure or cross breed not included in the foregoing sections, calved in or prior to 1870.—First prize, Samuel Garnett, Arch Hall, Navan, for half-bred Shorthorn heifer. Highly commended: J. Scally, Irwinstown, Killucan, for cross bred Hereford and Kerry heifer; commended, Robert Fetherston H. Griffinstown, Kinnegad, for cross bred heifer.

Pair of Fat Oxen of any breed that have been fairly and *bona fide* worked as plough bullocks up to May, 1871.—First prize, Thomas Winder, Killaderrig, Ashford, county Wicklow, for a pair of Shorthorn plough bullocks.

Best of all the Prize Fat Oxen.—Prize, Major Barton, Straffan.

Best of all the Prize Fat Cows.—Prize, Hon. John Massey, Limerick.

Best of all the Prize Fat Heifers.—Prize, Samuel Garnett, Arch Hall, Navan.

PIGS

occupied in the several sections 48 pens, and were every-

thing that could be desired in breeding and quality. The list of prizes is as follows:

COLOURED BREEDS.

Boar six months and not exceeding twelve months old.—First prize, Robert G. Cosby, Stradbally Hall, Stradbally, Queen's County, for Berkshire boar; second, Robert G. Cosby, for Berkshire boar.

Boar exceeding twelve and not exceeding twenty-four months old.—First prize, Charles H. Peacock, Belmont, Wexford, for Berkshire boar; second, Lord Talbot de Malahide, for Berkshire boar. Highly commended: Wm. Jameson, Montrose, Donnybrook, for "Dignity."

Breeding Sow in pig, or having had a litter within six months.—First prize, Annesley B. Noble, Danescourt, Athboy, for Berkshire sow, with litter of nine pigs; second, W. Hutchinson Massy, Mount Massy, Macroom, for Berkshire sow. Highly commended: John Molloy, 72, Mountjoy-street, Dublin, for pure-bred Berkshire sow (Beauty); commended, Lord Clermont, Ravensdale Park, Newry, for Berkshire sow.

Three breeding Pigs of the same litter under ten months old.—First prize, Lord Clermont, Ravensdale Park, Newry, for three Berkshire sows; second, Lieutenant-Colonel C. B. Chichester, Runamont, Roscommon, for three Berkshire sows under ten months. Highly commended: Lieutenant-Colonel C. B. Chichester, for three Berkshire sows under ten months old.

Litter of not less than six Pigs not exceeding five months old, accompanied by the sow.—First prize, Robert G. Cosby, Stradbally, Queen's County, for Berkshire sow and six pigs; second, William Jameson, Montrose, Donnybrook, for black Berkshire litter accompanied by sow.

WHITE BREEDS.

Boar six months and not exceeding twelve months old.—First prize, John Molloy, 72, Mountjoy-street, Dublin, for a pure-bred Yorkshire boar (Snowdrop); second, James Cullen, Liscarton Castle, Navan, for one white-breed boar. Commended: J. L. Naper, Lougherew, Oldcastle, for "York," and Cumberland boar, "The Claimant."

Boar exceeding twelve and not exceeding twenty-four months old.—First prize R. W. Boyle, Milltown House, Milltown, county Dublin.

Breeding Sow in-pig or having had a litter within six months.—First prize, Thomas Verdon, Mossfield House, Wavertree, Liverpool, for "Royal Princess"; second, R. W. Boyle, Milltown House, Milltown, county Dublin. Commended: Warren Wright, Brookvale-road, Donnybrook, for pure-bred white Yorkshire.

Three breeding Pigs of the same litter under ten months old.—First prize, the Earl of Clonmell, Bishop's Court, Straffan, for three York and Cumberland sows; second, Jonn Adams, Creevy House, Grauard, for three Yorkshire breeding-pigs of the same litter.

Litter of not less than six Pigs not exceeding five months old, accompanied by the sow.—First prize, J. L. Naper, Lougherew, Oldcastle, for sow and litter, York and Cumberland breed.

Fat Pig of any age or breed not exceeding eighteen months old.—First prize, Richard W. Reynell, Killynau, Killucan, for Berkshire sow.

IMPLEMENTS.—The exhibition of agricultural implements, machines, and miscellaneous articles, was very extensive, but lost much in effect from being scattered in several places totally unconnected, and from being uncomfortably crowded: so much so that it annually becomes more and more evident that greater space must be provided for this department of the Royal Dublin Society's spring Shows, to meet the requirements of the country. On this occasion there were 102 stands, of which the Irish and English firms were in about equal numbers, but in reality the English manufacturers were more numerous represented than the Irish, many of the latter being agents to the former, having on their stands several implements and machines from first-class English firms. Only four Scotch firms put in an appearance. The following is a list of the several exhibitors.

IRISH.—Thos. McKenzie and Sons, Dublin and Cork; W. and J. Ritchie, Ardee; Wm. Kerr, Henry-street, Dublin; J. Edmondson, Capel-street, Dublin; T. Bradford and Co., Dawson-street, Dublin, London, and Manchester; Smith and Wellstood, Dublin, London, and Glasgow; F. Healy, Hammond-lane, Dublin; Thos. Pearson, Ship-street, Dublin; H. Askin, Newtownards, Belfast; Dublin and Wicklow Chemical Manure Company, Dublin; R. L. Hughes, Dame-street, Dublin; Hillsborough Woollen Company, Hillsborough; Fergus Farrell and Son, Capel-street, Dublin; M. Mahony and Brothers, Camden-quay, Cork; Drogheda Chemical Manure Company, Drogheda; Dublin Cattle-food Company, Jervis-street, Dublin; Edwd. Francis, Camden-street, Dublin; J. Copeland, Ballymore, Eustace; Pim Brothers and Co., Dublin; Wheeler and Wilson, Stephen's-green, Dublin; W. and H. M. Goulding, Cork and Dublin; W. Carson and Sons, Bachelor's-walk, Dublin; John Jacques, Capel-street, Dublin; Edmondson Brothers, Dame-street, Dublin; McMester, Hodgson and Co., Capel-street, Dublin; National Manure Company, Hanover-quay, Dublin; A. L. Eckford, Sandymount, Dublin; Farrelly and Son, Hawkins-street, Dublin; W. Wight, Eustace-street, Dublin; Mrs. Callan, South Frederick-street, Dublin; T. K. Austin and Co., Westmoreland-street, Dublin; J. Rutherford, Eden-quay, Dublin; J. D. Watkins, Dame-street, Dublin; Dublin Dried Grains Company, Rainsford-street, Dublin; Paul and Vinecut, Blackhall-place, Dublin; James McKinlay and Son, Straybane, Londonderry; David Martin, Prussia-street, Dublin; Richard F. Kane and Co., Cappelquin, Waterford; Kenau and Sons, Fishamble-street, Dublin; W. Daniel, Mary-street, Dublin; W. O'Neill, Athy; M. Hill and Co., Usher's-quay, Dublin; Mark Purser, Carlow; A. and A. Lovely, Shaw-street, Dublin; Thos. Dockrell, Stephen's-green, Dublin; Jas. Macken and Son, Poolbeg-street, Dublin.

ENGLISH.—J. and F. Howard, Bedford; R. Hornsby and Sons, Grantham; Richard Garrett and Sons, Saxmundham, Suffolk; Ransoms and Sims, Ipswich; E. R. and F. Turner, Ipswich; Reuben Hunt and J. A. Tawell, Earl's Colne, Essex; Ashby, Jeffery, and Luke, Stamford; John Weetman, Ipswich; John G. Rollins, Old Swan

Wharf, London; Thomas and Taylor, Salford, Manchester; Penny and Co., Lincoln; Richmonds and Norton, South John-street, Liverpool; W. S. Boulton, Norwich; Whiting and Cowan, Liverpool; Jas. Eastwood, Blaekburu; T. Hynes and Sons, Edgware-road, London; Bryan Coreoran, Witt, and Co., Mark-lane, London; Head, Wrightson, and Co., Stockton-on-Tees; Slack and Brownlow, Hulme, Manchester; W. A. Hilton, Aston, Birmingham; Edwd. Lewis, Westbourne-park, London; Rd. C. Sylvester, Clerkenwell, London; G. Davies, Regent-street, London; B. C. Tipper, Balsall-heath, Birmingham; Day, Son, and Hewitt, Baker-street, London; J. Beach, Dudley; H. Driffield, Regent's-park, London; C. Norington and Co., Plymouth; J. Vanston, Bridport-street, London; De Leon and André, Oxford-street, London; Picksley, Sims, and Co., Leigh, Lancashire; W. A. Wood, Upper Thames-street, London; Samuelson and Co., Banbury, Oxon; Jno. Williams Rhuddlan, Rhyll; W. N. Nicholson and Son, Newark; Robt. Boby, Bury St. Edmunds; The Reading Ironworks, Reading, Berks; Bristol Waggon Works Company, Bristol; Thos. Baker, Newbury, Berks; Isaac Dixon, Hatton-garden, Liverpool; Le Butt, Bury St. Edmunds, Suffolk; Henry Inman, Rosebank, Stretford; Haughton and Thompson, Carlisle; Francis Morton and Co., Liverpool, London, and Glasgow; Mrs. E. Ellis, Notting-hill, London.

SCOTCH.—Alex. Jaek and Sons, Maybole, Ayrshire; J. and T. Young, Ayr; Thos. Hunter, Maybole; A. and J. Main, Shaw-street.

JUDGES.

SNORTHORNS.—J. Stratton, jun., Alton Priors, Marlborough, Wilts; R. Jefferson, Prestou House, Whitehaven; Jacob Wilson, Woodhorn Manor, Morpeth.

OTHER BREEDS, NOT KERRIES.—H. Heywood, Blakemere, near Hereford; J. Druce, Eynsham, Oxon.

KERRIES.—L. Christy, Carrigen, Croom; A. Darker, Barn Hill, Clonsilla; J. Butler, Waterville, Cahirciveen.

FAT STOCK.—J. Simson, Cloona Castle, Hollymount; D. Kerr, Clonin Farm, Edenderry; W. Heathcock, Butcher, Birkenhead.

PIGS.—Major H. Stanley M'Clintock, D. L., Hillsboro' Castle, Hillsboro'; J. Fisher, Carhead, Crosshills, York; A. Warburton, Kill, Nass.

THE LAMB DISEASE.

At Bodmin Mr. E. TUCKER believed the late dry summers had been favourable to the production of parasites, and the dreadful lamb disease was now telling its own tale in the scarcity and very high price of sheep. In the summer of 1870 thousands of lambs intended for rearing in Cornwall were sold for slaughter from fear of the disease, and the newspaper reports informed them that the lamb disease made sad havoc in many counties in England last year, in some cases 50 per cent. and upwards of the flocks being swept off. The consequence had been that after numerous applications the Royal Agricultural Society had taken the matter up, and a committee of the council was appointed to assist Professor Simonds in the investigation of this mysterious disease. Professor Brown had recently lectured at Maidstone on parasitic diseases in animals, and dwelt at some length on parasites in the lungs of lambs. The professor also referred in his lecture to the inquiry now going on by the Royal Agricultural Society, and said but little progress had yet been made. Now, he understood from Professor Brown's lecture that he had but little faith in any known means of cure, or how the parasites could be removed from the lungs of lambs with safety to the animal's life, but he would rely more on preventive means, and recommended when pastures had been eaten by sheep, even a year previously, that a mixture of lime and salt be spread

over it to destroy the larva voided with the excrement of the sheep, which would otherwise remain on the land. Otherwise healthy lambs being afterwards brought to feed on such pastures, the parasites would find their way into the lungs, and thus produce the disease. Other high authorities, such as Professor Simonds and Dr. Crisp, held similar opinions on the production of the lamb disease, but such was not in accordance with his experience. With due respect, he believed it a very great mistake to suppose that the disease was ever so produced, and that parasites in the lungs of lambs were solely consequent on their being fed on pastures naturally liable to their production, and that often a small portion of land affected a large flock. To his mind the inquiry was in a nut-shell. They wanted science to enable them to distinguish those unhealthy pastures, with the means of preventing their present ill-effects. He believed it the duty of agriculturists generally, especially in Cornwall, a county that had suffered so much, to assist in this matter. He knew of no other man who had thrown so much light on the lamb disease as Dr. Crisp, and should like the Chamber to invite the doctor to come down and meet the farmers of Cornwall, when that gentleman could hear their practical opinion, which, coupled with his scientific knowledge, might be productive of beneficial results; and by being made known through the press it would assist in the national inquiry.

THE CROYDON FARMERS' CLUB.

At a meeting of this club held at the Greyhound, Mr. W. Taylor in the chair, Professor Pritchard, of the Royal Veterinary College, London, delivered a lecture on Indigestion in the Horse.

Professor PRITCHARD said that on a previous occasion he had described the process of perfect digestion, and now he intended to speak of the impaired function of digestion commonly known and exhibited under the term indigestion. He was desirous not to lead them to suppose that he was about to exhaust the subject, because, as in the human subject, indigestion in the horse arose from a number of causes, and had a number of effects. He merely wanted to bring under notice some of those causes of indigestion which were most commonly met with, and he would endeavour to speak his mind on the subject as clearly as possible. He divided the subject into two heads—chronic indigestion and acute indigestion. The chronic or impaired indigestion was more frequently met with than the acute form. How common it was to notice that a horse was suffering from some illness which gave rise to certain symptoms, such as a staring coat, and the condition known as hide-bound, which would prevent the animal from performing its ordinary work. Sometimes, as a consequence of such a condition, the horse would eat almost any dirty rubbish with which it came in contact, constantly licking the stalls, putting its head under the manger, and probably eating its own dung. All these symptoms were attendant upon impaired digestion, and while not indicative of any amount of disease, were calculated to impair a horse's serviceability, and to prove that it was not in proper health. He maintained that the process of digestion was not completed in the stomach; the completion took place, undoubtedly, in the first portion of the intestines, and anything which would interfere with the process would derange the animal's health. The causes which gave rise to indigestion were imperfect mastication, which might be brought about in several ways, such as the imperfect condition of the teeth, congenital deformity, improper wear of the teeth, or disease. If imperfect mastication existed, there would be chronic indigestion. If the proper amount of saliva were not poured into the mouth there would be much the same result as from imperfect mastication. If horses were irregularly fed they would suffer from indigestion. The horse had but a small stomach, and was constantly taking food in small quantities. But if allowed to eat *ad libitum*, the stomach became distended; it was called upon to perform too much work, and the function becoming impaired, indigestion would be the result. Since carters had been furnished with proper nose-bags, indigestion in horses had become less frequent, showing that irregular feeding was one of the causes which had before produced indigestion. Overfeeding was undoubtedly a cause of indigestion. Regular feeding was most important. Feeding horses upon coarse food would produce bad results; it was a bad practice to allow horses to take a large quantity of food before taking them to water. He was satisfied that if throughout this country carters were to adopt the plan of making horses drink a gallon or two gallons of water before they were fed, the gastric juices of the stomach would be secreted in a proper and healthy manner, and the digestive process would go on properly and regularly. Referring to the little creatures in the stomach of the horse, called "bots" (the larvæ of the gad-fly), he did not think the animals suffered any inconvenience from them. The habit of a horse "crib-biting" he considered was the result of impaired digestion, and that before commencing the crib-biting the horses must have suffered considerably. Broken wind he also thought was a result of the impaired digestive process. He recommended that a broken-winded horse should be fed on good food and in small quantities, and thought by this treatment an amendment would usually follow. As to the treatment of impaired digestion generally, he thought more was to be done by stable treatment than by medicinal treatment. He would give but small quantities of food, bed the animal upon sawdust, and let it have regular exercise daily. A small quantity of tonic medicine might also be given. If an animal had been living

upon coarse food, he would give a dose of purgative medicine to get rid of any offending material in the alimentary tract. If the stomach of any animal was distended so that its muscular wall was placed upon the stretch to a considerable extent, the muscular coat at once became incapable of performing its functions. Such a condition was commonly called a gorged stomach. When that condition existed it might be known by the animal appearing in a drowsy state, and taking no notice of anything which was going on. There were also other symptoms sometimes more acute, or at all events more palpable; the horse lost the capability of walking steadily across the box, and if his pulse were examined it would be found very slow. Sometimes he would stagger and threaten to fall, and this condition was called "the stomach staggers." Professor Pritchard detailed the kind of treatment necessary in this disease, and alluded to several other points in connection with the subject, showing how many defects in the horse were either intimately or remotely connected with imperfect digestion.

Dr. SHORTHOUSE asked what time it would take a healthy horse, properly fed, to digest its food.

Professor PRITCHARD said two or three hours.

Dr. SHORTHOUSE said he had wanted to know how long digestion did take, and also, very definitely, about the "little and often" system of feeding; because, for his own part, he thought one meal ought to digest before another was put into the stomach.

Professor PRITCHARD said he thought the feeding, instead of about four times a day, should be seven or eight times.

Dr. SHORTHOUSE said if crude material were put into the stomach where matter was in a half-digested state there would be indigestion instead of digestion, which was the formation of that pabulum which was to nourish the animal. He referred to various improper methods of feeding horses by which indigestion might be caused, and with regard to a statement of Professor Pritchard that broken wind in horses was a result of indigestion, said if he was convinced of one thing more than another, it was that whistling, roaring, and broken wind were hereditary in nine cases of ten. He suggested that for the purpose of bedding horses deal shavings were better than sawdust, as the horses would not eat them, and they contained a sufficiency of turpentine to keep the animals free from vermin. He disagreed with the administration of sulphate of iron in large quantities as a horse medicine, and with reference to the ill-effects of drastic medicines in general, said he had no doubt that that celebrated greyhound, Master McGrath, was poisoned by an overdose of castor-oil.

Mr. WILSON asked if an animal when crib-biting was seeking for an antidote, and what could be given it to prevent it continuing to do. Professor Pritchard had mentioned indigestion as a cause of broken wind in horses. He stated that a horse which he had in that condition had eaten some dusty hay, and he asked if that was likely to have caused the broken-windiness. He also asked if indigestion was the cause of "gripes" in horses.

Professor PRITCHARD said the licking of the stalls by the animal in some instances was due to its seeking an antidote; but feeding upon rubbish, eating its own dung, &c., was due to an excited and unhealthy state of the stomach. He should be inclined to think that Mr. Wilson's horse got broken-winded through eating dusty hay. Indigestion, he had no doubt, would cause the gripes. With reference to the remarks of Dr. Shorthouse, about the "little and often" system of feeding, and that the stomach of an animal wanted rest, he said it must be taken into consideration that where the stomach was large it would want a longer period of rest than where it was small. The stomach of a horse was remarkably small, being not much larger than that of Dr. Shorthouse. If he wanted to get a horse into good condition he should give him his corn in small quantities, and frequently, and should expect better results from that system than from any other.

Some argument followed between the Professor and Dr. Shorthouse as to the circumstances under which animals be-

came "blown" from over-eating, and the particular gases which caused distension. There was some discrepancy between the opinions of the two gentlemen, and Dr. Shorthouse stated that he was willing to buy an old cow and allow her to over-eat herself among clover, in order that the point might be settled.

The usual votes of thanks were passed, and the meeting separated.

EAST SUFFOLK CHAMBER OF AGRICULTURE.

At the April meeting held in Ipswich, Colonel G. Tomline, M.P., in the chair, the first business was to consider whether an arrangement should be entered into with Mr. Sibson, the chemist, for making analyses of manures and oil-cakes, for the members for the next twelve months.

Mr. W. S. GRIMWADE, observing that he had sent five samples, and that the analyses he had received were very full, and that if it was of any practical value it was very desirable to continue the appointment of chemist for another year, moved that Mr. Sibson's terms be accepted.

Mr. W. KERSEY seconded the motion, which was carried.

Mr. EVERETT said his attention having been called to the discussion which took place at the Framlingham Farmers' Club upon the subject of experimental agricultural stations, moved the following resolution: "That this Chamber desires to join the Framlingham Farmers' Club in respectfully suggesting to the governors of the Albert Middle Class College the advantages which would accrue to the county from the establishment of a chemical laboratory and professorship of chemistry in connection with that institution." This was seconded and carried.

Mr. CORRANCE, M.P., moved the following resolutions with regard to the Public Health Bill: "That the first effect of such Bill must be the increase of local rates for objects not immediately benefiting the present class of ratepayers, whose interests are not permanent, and consequently rather of general importance than concerning the small class liable to local taxation. That the provisions of this Bill both as regards urban and rural districts are not clear or satisfactory in such respects and require amendment, in default of which it is the opinion of this Chamber that it should not become law." "That no local authority competent to discharge the duties imposed by this Bill can or ought to undertake them subject to the provisions contained in the 75th, 78th, 79th, and 86th clauses of the Bill."

Mr. W. S. Grimwade moved the first of Mr. Corrance's resolutions, which was carried; and Mr. Corrance moved the second resolution, which was also carried.

The CHAIRMAN moved: "That this Chamber greatly regrets that the Central Chamber has allowed the Budget to be brought forward, and a large surplus to be disposed of, without having arranged for a deputation to wait upon the Chancellor of the Exchequer with a view to the repeal of the Malt-tax."

Mr. BIDDELL condemned the supineness of the Central Chamber in respect to this matter, and said they did not deserve to succeed in obtaining the repeal of the tax if they one year sent a deputation, which was favourably received, to the Chancellor of the Exchequer, the next year wrote a very mild letter, and the third did nothing at all. At a meeting of the Business Committee of the Central Chamber, of which he was a member, he was astounded to hear a gentleman say they ought not to bring up the question of the Budget because it was a political question. If this was to be the way in which the question was dealt with they might have a surplus of three millions and a half three times a year and would never get any nearer repeal. Ardent repealer as he was, he would not put on an extra tax in order to take off the Malt-tax, but when there was a surplus they ought to agitate for its repeal.

Mr. GRIMWADE thoroughly agreed with Mr. Biddell and thought the Central Chamber ought to be ashamed of itself (applause).

Mr. BIDDELL pointed out the absurdity of the Central Chamber fixing a discussion on the Budget for May when everything would be settled.

Mr. W. GURDON argued in favour of the suggestion he made on this subject some years ago.

Mr. CORRANCE said after the Chancellor of the Exchequer had made his statement he asked Mr. Read and Col. Barttelot, whom he regarded as the party leaders on this question, what they proposed to do. Mr. Read's reply was that he should say something about it presently. Col. Barttelot said he thought it a good common-place budget and after all there was no surplus—it was a restitution. He (Mr. Corrance) said "That only affects 2½ millions out of three millions," and Col. Barttelot's reply was, "What would be the good of the balance to us?"

Mr. BREWSTER argued that it was no use to seek for the reduction of the tax. They must have the repeal, with some other tax to be substituted.

The motion was then carried, and a vote of thanks having been passed to the chairman the meeting broke up.

THE GUANO TRADE.

[The following correspondence has been forwarded to us for publication:]

Honingham Thorpe, Norwich, March 29th, 1872.

My Lord,—I beg to call your attention to a recent discovery by British merchantmen of a deposit of guano upon the uninhabited coast of Patagonia. The Republic of Chili claim this region, and from despatches courteously read to me by Mr. Hammond when I was at the Foreign-office yesterday, it appears that the Chilian Government have exercised authority over that coast for some years past.

But your lordship would confer a great obligation on the agricultural interest of the United Kingdom, by urging the Government of Chili to charge but a small royalty for this guano. The deposit, being in a moist climate, has but little ammonia, and is probably not worth more than £3 per ton delivered in this country. But any new source of manure is of great value to us, and under any circumstance I trust your lordship will insist upon England being treated, in buying this guano, as one of the "most favoured nations."

The other point to which I would call your lordship's attention, in relation to the guano trade, is the supply we now receive from Peru. It was, till lately, of one good uniform quality, but now cargoes are not only much less valuable, but they vary considerably in quality; still the Peruvian Government insist on charging *one price* for guano that varies as much as £4 per ton in value. Will your lordship give the Government of Peru a friendly hint that it would be much fairer to sell their guano at a *standard of value*, rather than at a uniform price, when there is no uniform quality? Such a plan would be a great advantage to the merchants and farmers, and do much to restore confidence in the trade, and would tend to greatly increase the demand which has so seriously declined of late.

I am, my Lord, your obedient servant,

CLARE SEWELL READ.

The Right Hon. Earl Granville.

Foreign-office, April 1st, 1872.

Sir,—With reference to your letter of the 29th ultimo, I am directed by Earl Granville to inform you that his lordship has instructed her Majesty's Chargé d'Affaires at Santiago, by this day's mail, to urge the Chilian Government to permit the export of guano from Patagonia, by British vessels, on moderate terms.

His lordship has also instructed her Majesty's Chargé d'Affaires at Lima to call the attention of the Peruvian Government to your suggestion as to the advisability of selling their guano at a standard of value, instead of at an uniform price.

I am, sir, your most obedient and humble servant,

G. HAMMOND.

C. S. Read, Esq., M.P., &c., &c., &c.,
Honingham Thorpe, Norwich.

SALE OF THE LATE MR. PAWLETT'S SHORTHORN HERD,

AT BEESTON, BEDFORDSHIRE, ON THURSDAY,
APRIL 4, 1872.

BY MR. JOHN THORNTON.

"He was a tall, thin, lean man, with a sallow visage, dressed in a green buttoned-up frock-coat, and carried an umbrella. In conversation, he had little to say, but his remarks were always worth listening to, and full of sense." Such were the spare particulars we could glean as the Great Northern Scotch express sped away and dropped us, carriage and all, at Sandy-station, on the cold, grey morning of Thursday, in Easter week. Yet the public at large must have known more of that lean man, or they would never have mustered in such numbers from east and west, north and south, from Scotland, from Ireland, and even from distant Carmarthen, to see the last leaf turned over of his quiet, uneventful life, and to appraise his kine at £200 per head, calves and all. He began farming life near Stamford, and, by *Thornton's Circular*, bred a few Shorthorns from the old Burghley herd, some of which finally passing into the great Shepherd King's hands at Babraham, produced the white bull-calf First Fruits, "the best of all the animals," and recipient of the gold medal at the great Battersea Show 1862. Then he came south, to the light soil and green meadows by the mill-stream of Sandy Warren, where he laid in a store of good Leicesters, which he kept up for many years, and finally sent to the Royal shows, running Mr. Sanday often neck and neck for the premiums, and giving his best sheep names after those towns which the Royal Society delighted to honour. Well might his corn fields laugh and sing with plenty. The land became so rich that he was tempted to try another system; he sold his Leicester flock in 1860-61, and ended as he had begun it, with Shorthorns. He bought the set of the *Herd Book*, and then Mr. Adkins' best Charmers, at the 1860 Milcote sale, and followed them up with three Bates' heifers, from Mr. Phillips, of Broomborough, and some from Colonel Duncombe, including Heather Bell, of the Fame tribe. After that he made a visit to Warlabby, and took three from Mr. Jolly, and hired Highborn of Mr. Booth; sold off his Bates' purchases, and put himself in with a cow and a calf of the Fame tribe at Mr. Sanday's sale at Holme-pierrepont in 1861; and as he followed Mr. Sanday's steps in Leicesters so he followed them in Shorthorns, and took Mr. Booth's Sir James from the bull-pound at Holme-pierrepont to the thatched shed at Beeston. He also got one or two from Ireland, and took in the blood through Prince Hopewell. He made one or two disastrous investments, among them Mr. Douglas' Isabella Rose, but the luckiest hit of all was securing the Mantalini tribe, in Mr. Chandos Pole Gell's purchase of Rose of Promise, her daughter Rose of Hope, and her granddaughter bred by Mr. Pole Gell, the beautiful cow Rose of Warlabby. It was then that his modelling powers, so well practised on the Leicester, if perhaps though at the sacrifice of wool, began, and the round arched ribs from the "straight back bone with the swelling bosom" of Aylesby were brought to Beeston through old Breast Plate and Booth Royal, to which he sent his Towneley Pearl-Bracelet cow and the Holme-pierrepont Faithful; the former bringing him the prize bull Baron Killerby, whose eleven offsprings yielded only £3 short of £200 each. Faithful repeated her visit to Breast Plate at Aylesby, and brought him back the red and white bull Baron Warlabby, whose only daughter

realised 300 gs. and her infant heifer 125 gs., so that to Aylesby even as much as Killerby and Warlabby was Mr. Powlett indebted for that blood, and those substantial parallelograms of beef which will hand his name down to posterity.

The show-yard brought him a good many premiums as a set-off to his expenses, and as an exhibitor he was successful, though now and again Baron Killerby's dusky nose threw the prize away, and he never could quite get over his aversion to Richard Cœur de Lion. Theorists had there a good example of the black speck on the commingling of different strains. Poor old Baron! not even the brickbat with which his nose was polished could move the dark stain, or what the late Mr. Anthony Maynard called the "strong constitutioned *nause*," and he ended his days getting bulls for the Aberdeensians at at Sittyton. He left his ponderous frame and tremendous breadth of loin as compensation, and when the double cross was made the loin grew stronger, the flesh heavier, and the nose darker, as in the case of British Queen, which went, even as a doubtful breeder, for 85 guineas to Mr. Haslam, Lancashire, whose opponent, after bidding well up guinea for guinea, wished as a final bid that Mr. Haslam had stopped at home with Mr. Disraeli.

A pleasant walk by the river, through pastures green and meadows sweet, brought us to Beeston, where, surely, those mean-looking half-bred milch cows were placed as a set off to the fat-backed steers which were grazing by the mill. Edginton's tent was quite a sign-board to the sale, and a slight turn in the road brought us to the comfortable little farm-house, top of the green, where the old man had passed so many years of quiet life, and died in December last at three score years and twelve. A turn into the yard showed everything of primitive shape and homely comfort, old thatched sheds and tarred boardings were the only coverings in the straw-yard. There were the cattle knee-deep in straw with immense backs, round ribs, and that sweet, docile expression of countenance so indicative of the blood. The yard, furnished with Rose of Warlabby, Rose of Summer and Faithful, generally had the largest crowd, but Rose of Hope, Rose of Killerby, and Rose Blossom were equally admired. The bulls were in small boxes, and the calves in houses, and pens scarcely large enough for a Leicester sheep. The crowd grew so great that it was desirable to lunch half-an-hour before time, and the tent, set out for 300, became crammed. Mr. Charles Barnett, "the Squire of Stratton," was never more happy, nor had he ever a larger field. When the Royal speeches were done, and Mr. Torr gave his health, what Tally Ho's he got! It was a smart stroke of whipper-in business when the auctioneer said there were many hungry outside, and the place was filled again and again until everything was consumed. The strong north wind blew cold round the ring, and the covered rostrum was terribly full, so that the company became impatient for the event half-an-hour before the time of sale appointed. St. Edmund, the squire's county Suffolk, was put up first at 100 gs., but found no buyer; then the Herd Books were offered "with Mr. Pawlett's notes," which doubtless sent the price along for Mr. Staniforth, who, recently having found in an old set a bill of the Waterloo (2816) bull with the Lawnsleeves cross, paid 20 gs. for this, perhaps in the hope of a similar discovery. The first lot was offered at two to the minute, and the biddings for the old cow Rose of Promise went well along, "just like a good sale," as some one remarked, to 63 gs. Faithful was in a similarly doubtful state, yet she went for 50 gs., and both journey together to the fells of Westmoreland. Rose of Hope was fresh for her nine years, and six months gone to Lord Blithesome. She has been the

best breeder, for she had produced Rose of Warlabby and Prince Alfred, and looked "likely" for many a one yet. How tenaciously Mr. Skelton Jefferson, of Cumberland, clung to her against Mr. Marsh's nods, but finally 350 gs. was too much for cannie Cumberland, and "Mr. Marsh, of Hitchin, 350 gs." brought out ringing cheers all round the ring. Flora, by Mr. Torr's Booth Royal, had just got a little red-and-white cow-calf. Mr. Marsh looked as if he meant for her as well; but Mr. Torr and Mr. Bowman, another Cumbrian, were well in, but not quite long enough, for Mr. Marsh got her at 280 gs., amidst more cheers, whilst Mr. Bowman took her calf at 51 gs. Then came the plum of the sale, Rose of Warlabby, "Queen of the Ocean" over again, as an old breeder said. And a beautiful cow she is, with a graceful head, fine bosom, and such ribs and back! "sire and dam's sire both Warlabby bulls, and a breeder, milker and feeder," coupled with her own personal attractions, were most desirable, although having calved four months ago she was even then giving 14 quarts a-day. Some mild gentleman timidly said 50, and another whispered a 100, as if afraid it might be heard; but 400—500 everybody heard, "and fifty," and the glass runs. "The Rev. T. Staniforth, Windermere!" and more cheering. Rose of Summer, a cow of enormous substance, accompanies her at about 200 less, but the spirit and excitement of the sale was then over. Men talked, laughed, hummed, and the 1,500 made such a commotion, with the strong north wind blowing, and the drizzle falling, that the business proceedings were no easy task. Flora, somewhat doubtful, was put at a 100 gs. by Mr. Crosbie of Ireland; and Rose of Killyberby, Mr. Pawlett's favourite cow out of lot 5, went cheap enough into Norfolk at 325 gs., a good addition to Mr. Aylmer's herd. Rose of Beauty, a beautiful specimen and a good breeder, suffered from hard breathing, else the 185 gs. given for her by the Laird of Havering might have swelled into double the money. Rose of Eden was a favourite lot, but her back was up, and her two calves before she was three years old, accounted for it. Mr. Marsh and Mr. Waldo, Kent, fought well out for her, until Kenfish Fire, on a more substantial target, killed at 500 gs., and Mr. Marsh got the capering strong backed roan babe at 125 gs. Ringlet was also a lovely specimen, but Fitz Killyberby, the Charnier cross, beneficial as it doubtless may be, went somewhat against her.

Roseberry was another magnificent heifer; Mr. Staniforth took her at 330 gs., and Mr. Marsh got her red calf at the same price which he paid for the other. Lots 19 and 20 were especially fancied, and although the roan was more like winning, the red and white had got the growth, and made the better price. How the calves sold! Bidders on the cows, disappointed, went in for them, and they made astonishing prices.

The bulls in the houses did not look well, but they came out much better, as indeed did the cows, for a really good animal always proves better out than in, and Mr. Pawlett never would show one unless he were walked out. Lord Blithesome was the favourite, and many wanted him. Mr. Rose, however, would not be denied under a good deal, and got him for his new Norfolk herd at 330 gs. Prince Regent, Mr. Fowler, the acting executor, bought at 210 gs., cheered by his friends. The others sold well; even the lame Hamlet made 63 gs., and the last calf, four months old, was bought for 60 gs. for the old Rathenthorpe herd. So this wonderful sale finished, at four to the minute, and the company thinned down in less than a quarter of an hour. Old friends and neighbours stood about the house and the gate "wondering beyond talk,"

But how many went away with their hands behind them! Several of Ireland's best men came over with their "herds" and got nothing. Three travelled out of Scotland, and went "bock agen" alike empty handed; and a gentleman with his three servants, 400 miles from home, returned with a five-months' calf between them. To the ring frequenter the faces were different to those usually seen: it was a company of the old school—men, breeders from boyhood, and judges that are only now and again seen in the Royal or Yorkshire rings. Not one nobleman or distinguished foreigner was said to be present, personally or by proxy, notwithstanding such an average! and it was remarked, that had there been double the number there were customers for them. The great moral of this remarkable sale seems to be, that not even the humblest tenant-farmer need despair as a breeder. Let him but get good animals of the best blood, and they will always sell, with customers found ready for them whenever the time comes.

COWS AND HEIFERS.

- Rose of Promise, roan, calved August 24, 1858; by Heir-at-Law (13005), dam Rose of Autumn by Sir Henry (10824).—Mr. A. Metcalfe, Westmoreland, 63 gs.
- Faithful, roan, calved January 1, 1861; by Sir James (16980), dam Faith by Sir Charles (12075).—Mr. H. J. Gibbon, Holmerdale, Westmoreland, 50 gs.
- Rose of Hope, roan, calved April 27, 1863; by Prince Alfred (13494), dam Rose of Promise by Heir-at-Law (13005).—Mr. R. Marsh, Hitchin, 350 gs.
- Flora, roan, calved October 14, 1864; by Booth Royal (15673), dam Faithful by Sir James (16980).—Mr. R. Marsh, 280 gs. [Calved March 22, 1872, red and white C.C., by Majestic (29255).—Mr. J. Bowman, Cumberland, 51 gs.]
- Rose of Warlabby, red and little white, calved in August, 1865; by British Flag (19351), dam Rose of Hope by Prince Alfred (13494).—Rev. T. Staniforth, Windermere, 550 gs.
- Rose of Summer, red, calved July 15, 1866; by Prince Hoopewell (22592), dam Rose of Promise by Heir-at-Law (13005).—Rev. T. Staniforth, 360 gs.
- Fame, red, calved December 4, 1866; by Baron Killyberby (23364), dam Flora by Booth Royal (15673).—Mr. W. T. Crosbie, Ireland, 100 gs.
- Rose of Killyberby, red, calved July 28, 1867; by Baron Killyberby (23364), dam Rose of Warlabby by British Flag (19351).—Mr. H. Aylmer, Norfolk, 325 gs.
- Faith, red, calved October 25, 1867; by Baron Killyberby (23364), dam Flora by Booth Royal (15673).—Rev. J. Micklethwaite, Norfolk, 155 gs.
- Rose of Beauty, roan, calved July 22, 1868; by Baron Killyberby (23364), dam Rose of Hope by Prince Alfred (13494).—Mr. D. McIntosh, Havering Park, Essex, 185 gs.
- Lady Faithful, red, calved November 21, 1868; by Baron Killyberby (23364), dam Faithful by Sir James (16980).—Mr. J. Bowman, Cumberland, 165 gs.
- Ringlet, roan, calved February 2, 1869; by Fitz Killyberby (25166), dam Fame by Baron Killyberby (23364).—Mr. B. St. John Aekers, Prinknash, Gloucestershire, 205 gs. [Calved March 11, 1872, roan B.C., by Prince Regent (29677).—Major Cochrane, Darlington, 31 gs.]
- Rose of Eden, red and white, calved March 1, 1869; by Baron Warlabby (23381), dam Rose of Warlabby by British Flag (19351).—Mr. E. W. Meade Waldo, Kent, 300 gs. [Calved February 4, 1872, roan C.C., by Mantalini Prince (29273).—Mr. R. Marsh, Hitchin, 125 gs.]
- Lady Jane, red, calved May 28, 1869; by Baron Killyberby (23364), dam Miracle by Prince James (20554).—Mr. B. St. John Aekers, Gloucestershire, 105 gs.
- Roseberry, roan, calved August 6, 1869; by Baron Killyberby (23364), dam Rose of Promise by Heir-at-Law (13005).—Rev. T. Staniforth, 330 gs. [Calved February 4, 1872, red C.C., by Mantalini Prince (29273).—Mr. R. Marsh, 125 gs.]
- British Queen, roan, calved November 13, 1869; by Prince Alfred (27107), dam Fairy Queen by Baron Killyberby (23364).—Mr. J. P. Haslam, Bolton, Lancashire, 85 gs.
- Rose Blossom, red and little white, calved January 6, 1870;

SALE OF MR. J. N. BEASLEY'S SHORT-HORNS,

AT CHAPEL BRAMPTON, NORTHAMPTON, ON FRIDAY, APRIL 12th.

BY MR. JOHN THORNTON.

There are few prettier sights to the lover of good stock than the Valley of the Nene, when full of grass, Hereford bullocks, Welsh runts, or Shorthorn steers. A man may even divert himself occasionally by the sight of a few good breeding Shorthorns, Mr. Beasley's being the oldest and best herd in this rich grazing district. The name of Beasley is as closely connected with the pure Shorthorn in the county of Northampton, as that of Althorp, Arbutnot, Knightley, and others, the Janetts, or J's, being the tribe upon which he has mainly rested. More than a score of years since Mr. Beasley, sen., sold off his herd, and the tribe was dispersed, not only through our own counties, but several animals found their way across the Atlantic.

The preface to the catalogue thus recounts their story: "The larger portion of this herd consists of animals of the celebrated J tribe, the history of which is as follows: Sir Henry Vane Tempest purchased the celebrated cow Princess by Favourite (252), from Mr. Robert Colling (for it is said 700 gs.), and bred from her and her offspring a small herd. One of the cows he gave to Sir John Thornton, chaplain to the Duke of Rutland, as a dairy cow (the Princesses being noted milkers); and this cow was purchased at the sale after Sir John Thornton's death by the late Mr. Thomas Beasley of Harston, who afterwards exchanged her with his brother Mr. John Beasley of Chapel Brampton. The pedigree of this cow as given in Sir John Thornton's sale catalogue was as follows: Janette, calved in 1820; bred by Sir Henry Vane Tempest; by his Wellington (684), dam by Phenomenon (491), g. d. by Favourite (252), g. gr. d. by Favourite (252),—by Favourite (252). At the Overstone sale in 1851 the J's were entered in the catalogue with the pedigree ending with the last Favourite cross, but after careful investigation by the first authorities, it was concluded they were descended from Alexina, own sister to Sir Henry Vane Tempest's Angelina, and that they were entitled to the same pedigree with which that cow was recited in the third volume of the Herd Book, Page 265; accordingly, in the tenth volume, published immediately after the Overstone sale, the J's have the pedigree attached to them as it is hereiu given. Those animals of the D family are descended from a cow belonging to Mr. Beasley's great grandfather, who lived at Sapperton in Lincolnshire; they are generally good milkers, and many of the Overstone and Thrusington prize oxen were of this family. The other animals were bred originally from West Highland Scots, which Mr. Beasley's father purchased at different times in Scotland, and on which pure-bred Shorthorn bulls have ever since been used. The bulls in service of late years at Chapel Brampton have been of first-class Bates blood.

It was intended to sell the herd last autumn, but foot-and-mouth disease breaking out, the sale was postponed until the spring. With the usual ill luck that accompanies this troublesome complaint, a few of the calves were lost; still the Irish story that they thrive better afterwards, proved true in this case, for the cattle were certainly brought out in that happy state of condition in which the animal is not obese but in apparently most healthy condition, as well as pleasing to the eye. The cows and heifers were shown in the grass, and very well they looked as a whole. Among the cows lot 2, with her long sweeping quarters and staring red and white colour, caught

by Baron Killerby (23364), dam Rose of Summer by Prince Hopewell (22592).—Mr. S. Jefferson, Cumberland, 180 gs. Blush, red, calved February 6, 1870; by Baron Killerby (23364), dam Hebe by Prince Hopewell (22592).—Mr. B. St. John Ackers, Gloucestershire, 145 gs. Rose of the Valley, roan, calved September 28, 1870; by Royal Booth (27350), dam Rose of Beauty by Baron Killerby (23364).—Mr. H. Pickersgill, Thirsk, Yorkshire, 290 gs. Rose of Autumn, red and little white, calved November 24, 1870; by Prince Alfred (27107), dam Rose of Summer by Prince Hopewell (22592).—Mr. T. Easton, Fifeshire, 305 gs. Innocence, white, calved January 22, 1871; by Prince Alfred (27107), dam Hebe by Prince Hopewell (22592).—Mr. J. P. Haslam, Bolton, Lancashire, 110 gs. Laura, red, calved March 27, 1871; by Royal Booth (27350), dam Lady Jane by Baron Killerby (23364).—Mr. G. E. Hawkins, Cambridge, 40 gs. Diadem, red, calved March 31, 1871; by Royal Booth (27350), dam Ringlet by Fitz-Killerby (26166).—Mr. B. St. John Ackers, Gloucestershire, 165 gs. Lady Flora, red, calved April 22, 1871; by Baron Killerby (23364), dam Flora by Booth Royal (15673).—Messrs. J. and J. Gaitskell, Cumberland, 150 gs. Rose of Beeston, roan, calved July 18, 1871; by Royal Booth (27350), dam Rose of Killerby by Baron Killerby (23364).—Mr. B. St. John Ackers, Gloucestershire, 215 gs. Fidelity, white, calved August 27, 1871; by Majestic (29255), dam Faithful by Sir James (16980).—Mr. J. C. Toppin, Cumberland, 85 gs. Farewell, roan, calved November 1, 1871; by Mantalini Prince (29273), dam Faith by Baron Killerby (23364).—Mr. D. Pugh, Carmarthen, 130 gs. Rose of Winter, red, calved January 20, 1872; by Prince Regent (29677), dam Rose of Summer by Prince Hopewell (22592).—Mr. J. P. Haslam, Lancashire, 120 gs.

BULLS.

Prince Pearl (29674), red, calved July 25, 1867; by Baron Warlaby (23381), dam Pearl by Richard Cœur de Lion (13590).—Mr. R. C. Ridge, Australia, 75 gs. Prince Royal (29680), roan, calved June 10, 1869; by Baron Killerby (23364), dam Rose of Hope by Prince Alfred (18494).—Messrs. Dudding, Lincolnshire, 100 gs. Prince Regent (29677), roan, calved May 7, 1870; by King Charles (24240), dam Flora by Booth Royal (15673).—Mr. F. Fowler, Henlow, Beds, 210 gs. Lord Blithesome (29067), roan, calved August 23, 1870; by Lord Blithe (22126), dam Rose of Killerby by Baron Killerby (23364).—Mr. T. Rose, Norfolk, 330 gs. Sultan (30083), roan, calved September 21, 1870; by Prince Alfred (27107), dam Rose of Promise by Heir-at-Law (13005).—Mr. H. Caddy, Cumberland, 120 gs. Hamlet, roan, calved March 11, 1871; by Royal Booth (27350), dam Rose of Eden by Baron Warlaby (23381).—Mr. J. Martin, Ely, 63 gs. Royal Hope, roan, calved March 27, 1871; by Royal Booth (27350), dam Rose of Hope by Prince Alfred (13494).—Duke of Richmond, Banffshire, 280 gs. Ranger, red, calved April 22, 1871; by Royal Booth (27350), dam Daphne by Fitz-Killerby (26166).—Messrs. T. Garne and Son, Gloucestershire, 110 gs. Bridegroom, roan, calved August 12, 1871; by Baron Killerby (23364), dam Florence by Prince Hopewell (22592).—Mr. G. J. Yarburgh, York, 70 gs. Monarch, red and white, calved December 9, 1871; by Majestic (29255), dam Rose of Warlaby by British Plag (19351).—Mr. J. C. Bowstead, Cumberland, 66 gs. Royal Heir, red, calved November 7, 1871; by Manfred (26801), dam Rose of Promise by Heir-at-Law (13005).—Messrs. Fox and Jefferson, Cumberland, 105 gs. Royalty, roan, calved December 25, 1871; by Prince Regent (29677), dam Rose of Beauty by Baron Killerby (23364).—Mr. W. Faulkner, Northampton, 60 gs.

SUMMARY.

	£	s.	d.	£	s.	d.
28 Cows averaged	220	6	3	6,168	15	0
12 Bulls	139	0	9	1,668	9	0
Averaged.....	195	18	7	47,837	4	0
21 Mantalimis averaged				247	7	0
18 Females				142	9	0

the eye, and when she afterwards came into the ring her good milking qualities were an additional attraction to her large broad frame. Many were the bids for her, and finally Mr. Walton got her for the Burghley herd, not very dear at 70 gs. A large white cow, on short legs, and strong limbed, was also conspicuous; proving to be lot 9, and by Fourth Duke of Thorndale; the four lots from her bespoken her usefulness, but perhaps being empty and breeding a white bull-calf too, kept her price down, for Lord Penrhyn got her at only 72 gs., whilst her little calf made 17 gs. And there's a good roan useful cow, that lot 10, with her swelling ribs, and neat fine character! What says her pedigree? By Mr. John Peel's Sir Launcelot, a pure short-pedigreed Booth bull, and out of lot 2, served in May by Mr. Oliver's Grand Duke 7th; but she must have calved, and when she came into the ring what a great strong-backed capering roan bull-calf she had at her side! That bronzed-looking man seems to know her merits; how persistently he bids for her, and finally gets her, and at only 50 gs. Surely she must be cheap at that figure which Mr. Simon Beattie gives, to take her out to Canada. Her calf, how eagerly the farmers bid for it—ten, twenty-five—thirty guineas, one, two, and the glass runs at forty, but that cool-looking gentleman has not done yet. "Five is against you, sir," a nod six, at forty-six for the calf, and the glass runs—Captain Furness, of Rugby, the buyer, and with £10 worth of milk he has a yearling fit for a Royal show.

But here seems the plum of the sale in that buxom rich-looking roan heifer; how gracefully she carries her sweet head, and how evenly her body is covered with flesh and overlaid with that abundant coat of rich roan-coloured hair! What lot is it? Lot 11, Judy! Yes; and hence the pass word on the luncheon ticket; but how is it with no lot from her in the catalogue? and only two months gone. Let us wait and hear what the auctioneer says for her in the ring. We go to lunch. What a bountiful spread is there, and how beautifully it is laid, as they say for 350. These four young men are Canadians, and that stout, strong-looking young fellow, with the broad chest and muscular frame, a native Australian, and as keen a judge of a beast as any breeder in the county. The chair is taken by Mr. Beasley, father of the owner of the stock, and Sir W. de C. Brooke is on his left. Lord Penrhyn is there, Mr. Stopford Sackville, M.P., and a number of country celebrities, but we do not hear of many from a distance. Then the toast are given, and off go the company to the ring. Surely the same nattiness that is seen in the buildings and farm-yard has been carried out with the ring. Post and planked rails are strongly put down underneath the old oak tree, and Mr. Thornton has so handsome a pulpit, that a wag christens him "Jack in the box" forthwith. The Pitsford men are out on strike and come to look on at what the more orderly Brampton men are doing. They bring in lot after lot, and at last in comes Judy, dam of the steer, feeding for Christmas, and of a heifer calf; and that she has been to Mr. Oliver's Grand Duke 7th, who died the day of her arrival, and that she is safe since February 6, do not greatly stimulate the biddings, which creep slowly along, until a 100 is reached; then Mr. Ridge bids five, and Colonel Loyd Lindsay nods, until 135 gs. is reached, and she is knocked down cheap enough to the Colonel. Mr. Walton gives 105 gs. for Jacqueline against Mr. Oliver, and cheers are given for the county. Mr. Oliver takes the next rich roan, J Fourth Grand Duke heifer with her slanting quarters, at 70 gs.; and Northamptonshire again comes out against Mr. Little of Wisbeach and Mr. Mumford of Oxon with Mr. Herbert Langham, and a 100 gs. bid for Janetia, bred by the late Mr. Adcock. The heifers sell well; Mr. Lynn gets the Lady Silvia Spencer with her

fine coat of hair at 55 gs. only; and Welcome, with those grand arched ribs, is booked to Mr. Beattie at 67 gs. Some of the heifers are tawny red and whites, and not taking in colour, still they go readily; and the last calf, a real beauty, Mr. Sartoris buys at 65 gs. for his friend the Duke of Manchester.

The bulls are headed by Lord Spencer's Doge, exhibited in Ireland, and Mr. Topham gets him at just over market price. J. Grand Duke, a very handsome bull, is well worth the 60 gs. Mr. G. Stratton pays for him, and he also got a few good cows as well. J. Grand Duke 2nd is the best looking, though a hard handler. Mr. Sanders brings sherry round the ring, and as he pours out a glass he bids a guinea, until this fine young bull is his at 70, and before the sale is over he has had 20 gs. profit offered for him. Mr. Aubrey Mumford gets a good hairy calf in Javelin at 60gs., and two bulls of Mr. Dormer's sell well, the better one going to Mr. Walker, of Brentwood, at 49 gs. So this sale closes, and Mr. Thornton thanks the company, telling the disappointed he can suit them, even better, with no offence to Mr. Beasley, next week, at Messrs. Atkinson's and Dickinson's sales; but they have had a good day and a fair sale. A few return to the fields, and view again those heavy-milking D cattle; whilst others study the half-bred West Highlanders, even with their six crosses, still showing the head and horns of the Highlander, though the massive carcass and early-maturing quality of the Shorthorn. The Pitsford men, even after beer and bread and cheese, cannot let well alone, and end with a few rounds, to their great disadvantage, with the Brampton men, for sticking to work and doing the duty to their master.

COWS AND HEIFERS.

- Winsome, by Lycidas (20249).—Mr. George Stratton, Husbards Bosworth, 35 gs.
 Queen Janette, by Royal Butterfly 5th (18756).—Marquis of Exeter, Burghley Park, 70 gs.
 Jeanie, by Romulus Butterfly (18741).—Mr. J. J. Sharp, Kettering, 55 gs.
 Dulce, by Jacques (20013).—Mr. G. Stratton, 36 gs.
 Hope, by Lycidas (20249).—Col. Loyd-Lindsay, 50 gs.
 Daffodil, by Second Duke of Airdrie (19600).—Earl of Derby, Knowles, 34 gs.
 Lady Janette, by Second Duke of Airdrie (19600).—Mr. G. S. Sackville, M.P., Drayton, 37 gs.
 Ditty, by Sir Launcelot (25159).—Mr. G. Schilling, Brampton Ash, 38 gs.
 [Her white cow-calf.—Mr. G. Schilling, 15 gs.]
 Ruslden Jantja 9th, by Fourth Duke of Thorndale (17750).—Lord Penrhyn, 72 gs.
 [Her white cow-calf.—Mr. C. Beasley, 17 gs.]
 Justine, by Sir Launcelot (25159).—Mr. S. Beattie, Canada, 50 gs.
 [Her bull-calf.—Captain Furness, 46 gs.]
 Judy, by Second Duke of Airdrie (19600).—Colonel Loyd-Lindsay, 135 gs.
 Duchess Janette, by Second Duke of Airdrie (19600).—Mr. G. S. Sackville, M.P., 45 gs.
 Jacqueline, by Dandilly Dan (23675).—Marquis of Exeter, 105 gs.
 Althorp Jantja, by Fourth Grand Duke (19874).—Mr. R. E. Oliver, 70 gs.
 Janetta, by Second Duke of Waterloo (23800).—Mr. H. H. Langham, Cottesbrooke Park, 100 gs.
 Dolly, by Juvenile (22021).—Mr. G. Schilling, 33 gs.
 Dea, by Juvenile (22021).—Mr. G. Stratton, 35 gs.
 Lady Silvia Spencer, by Grand Duke of Lightburne (26290).—Mr. J. Lynn, 55 gs.
 Princess Janette, by Juvenile (22021).—Lord Penrhyn, 70 gs.
 Welcome, by Fourth Grand Duke (19874).—Mr. S. Beattie, Canada, 67 gs.
 Juanita, by Jay (26457).—Mr. G. N. Wetton, 35 gs.
 Daisy, by Juvenile (22021).—Mr. J. Lawrence, 35 gs.
 Royal Janette, by Juvenile (22021).—Mr. J. Craig, 53 gs.
 Delight, by Juvenile (22021).—Mr. G. J. Grimsdick, 25 gs.

Dignity, by Juvenile (22021).—Mr. S. Beattie, Canula, 32 gs.

Jardinière, by Jay (26157).—Mr. F. Sartoris, for Duke of Manchester, 65 gs.

BULLS.

The Dodge, by Fourth Grand Duke (19874).—Mr. J. Topham, 45 gs.

J Grand Duke (28915), by Fourth Grand Duke (19874).—Mr. G. Stratton, 60 gs.

The Don (30128), by Fourth Grand Duke (19874).—Marquis of Camden, 36 gs.

J Grand Duke 2nd (28916), by Fourth Grand Duke (19874).—Mr. H. Sanders, 70 gs.

Judge, by Juvenile (22021).—Mr. F. S. Artendale, 31 gs.

Despot, by the Doge.—Mr. J. T. Smith, 37 gs.

J Cherry Duke, by Cherry Duke (25752).—Mr. J. L. Needham, 46 gs.

July, by Juvenile (22021).—Earl of Abergavenny, 40 gs.

Javelin, by J Grand Duke (28915).—Mr. J. Aubrey Mumford, 60 gs.

Janizary, by J Grand Duke (28915).—Mr. F. Underwood, 42 gs.

Druid, by J Grand Duke (28915).—Earl of Derby, 22 gs.

SUMMARY.

	£	s.	d.	£	s.	d.
26 cows averaged	61	6	1	1,593	18	0
11 bulls „	46	13	6	513	9	0
37 averaged	56	19	1	£2,107	7	0
13 J cows averaged 70 gs.,				7 J bulls averaged	50	gs.

There were also sold the following young bulls, the property of Mr. Clement C. Dormer, Courteen Hall, Northampton:

Simon Spencer, by Grand Duke of Lightburne (26290).—Mr. Darlowe, 30 gs.

Sonorous Spencer, by Twelfth Duke of Oxford (19633).—Mr. H. Walker, 49 gs.

SALE OF MESSRS. ATKINSON'S SHORTHORNS,

AT BYWELL HALL FARM, STOCKFIELD-ON-TYNE,
ON TUESDAY, APRIL 16TH, 1872,

BY

MR. T. WETHERELL AND MR. J. THORNTON.

“Presented to Messrs. Atkinson, Sept. 21, 1812, for the greatest general improvement on the Bywell Estate, for their farm at Peep-I-see, by their landlord and landlady, S. and F. Hodson.” So runs the inscription on a silver cup awarded as a prize to Messrs. Atkinson, just half a century ago; and the improvements that were made then in that improving district of Tyneside have still continued. Peep-I-see arose, so says tradition, through a pretty Northumbrian lass being accosted whilst milking a cow, by a gay gallant of the period, who, in reply to his inquiries as to the district, exclaimed, as she looked round the cow's leg, “Peep Peep I see,” and so the name became abbreviated by the hawkers of Newcastle crying “Peep-see-ta-ters,” on account of the fame of the potatoes grown upon the farm, at Peepy. The present generation abolished the well-earned title, and, although the farm stands a long up-hill mile from the Hall, re-christened it Bywell Hall Farm. So the house stands, certainly no credit to the estate, to which the farm contributes fully a thousand a-year, a poor domicile scarcely fit for a superior hind. A few of the old buildings still retain the tumble-down thatch of a previous generation, but there is a good array of stone steadings, of which any breeder of improved cattle might be proud. Broomley, Bearl, Styford, Sandhoe, and up to Hulton Castle, sacred to the memory of Thomas Bates, are all within a drive of

Peepy. Truly a prophet hath no honour in his own country, for though the blood was Crofton, Tempest, Towneley, and finally Booth, and the two or three recent purchases of the now most fashionable strain from Wallington, this found little favour in the eyes of the public, as a little Febrary heifer-calf by Thirteenth Grand Duke from a Maynard Flora dam, went but for 11 gs., whilst a King Charles calf a day younger, from a four-cross dam, went for 50 gs. The herd, however, has a standing of nigh three score years and ten. But it has been the practice to add occasionally thereto from other leading herds. The excellent Leopoldine tribe was a purchase from the Croftons. The Ruby and Beauty cows, a 500 guinea purchase, from Towneley, with half-a-crown as a luck-penny, had but six descendants in the catalogue, and altogether they fell 50 gs. short of the original cost-money. The old Rosamond and Fame tribes of Booth blood pulled up the average to within a trifle of £70 for the 75 head, and taken all through it was a successful sale.

A view of the cows in the fields showed some majestic animals, red, white, and roan, and conspicuous were they by their grandly arched ribs, broad backs, and developed structure of huge proportions. Ten or a dozen of the cows might fairly have put to shame the cow class at Wolverhampton, and difficult would have been the task to select one, two, and three therefrom. Some were for lot 10, the white 8th Beauty, which finally went, down-calfing, to swell Mr. Haslam's new herd at Bolton, Lancashire for 115 gs. Others took the massive roan Ringlet 2nd, with her deep body and graceful Lady Fragrant head. She also goes into Lancashire at a good 220 gs. Elegant's Bride, another white, was a ridiculously cheap cow, at 50 gs.; inasmuch as she was evidently going over her time. The majestic Meggy, lot 20, was probably the largest of the lot, and she is to remain in the county on Sir M. W. Ridley's Blydon estate. How different was her own sister Lady Jane, (lot 29) newly calved, giving 22 quarts a day; and lucky was Mr. Balmer in getting her and her calf 60 gs. cheaper than Meggy. Lot 22, Duchess of Windsor, was another extraordinary milker, and probably the sweetest cow, hair, colour, and symmetry combined, in the herd. The village Belle (lot 33), another exquisite specimen of symmetry, was very doubtful, still only three years old; but even this did not deter the practical Mr. Ridge, from Australia, who finally got her, amid the applause of the bystanders, for 105 gs. She has all the appearance of breeding, and a three months, sea voyage will, doubtless, render her, it is to be hoped, an increasing member of the bovine race. Lot 36, Bracelet, was also like a winner, and grandam of the massive lot 11. Two hundred was bid for her to go to the Antipodes, but she is for the county of Durham. The Fames were not all the plums, though several were right good animals. Castanet, lot 1, was mere beef, and her Ravenspur daughter, rather erratic in her ways, made 110 gs. on an in-calf guarantee, and so goes, with others bought by Mr. Maxwell Gumbleton, into Ireland. Mr. Benson, for Mr. Low, Tipperary, was also a buyer from across the channel. Castanet 3rd—the third generation—went newly calved to Mr. Crisp at the first of three figures. Casket, another useful heifer from lot 1, was also bought by Mr. Gumbleton, and the 4th Castanet seemed well selected by Mr. Bowman for his Cumberland lot.

A long chapter might be written on crossing; its effects on the rash pursner's purse, and its prolific results among the herds of Great Britain. Purity and pedigree are the rage nowadays, and well may they be. The current of the good blood is disturbed, and judgment in introducing a fresh strain is rarely found in the young, while, when practised by the old the original character takes too long a period to restore. A good family becomes unprolific and a cross of totally different

blood, and more often an indifferent animal and family besides are introduced in the plebeian state. Fertility follows with crudeness of form and divergence of character. Thus was it with that extraordinary Mistress Mary family. At Knowlmore they were the pinks of perfection, with the glorious cow Marion at their head. On a luckless day this white beauty was mated with Lord Liverpool, a bull with, certainly, as much pure Duchess blood in his veins, as Marion boasted pure Booth in hers. The ungainly but fruitful Primrose was the issue, and she gave birth to three heifers in succession. Mr. Gumbleton got her, cheap enough, at 68 gs. Mr. Robt. Jefferson took her daughter, even more crude, at 50gs.; her second goes to Sussex at 41gs., a more promising animal; and the one by King Charles, a mere calf, with the original blood restored fetched 70 gs. Two of the tribe had got a still wider cross in Yellow Jack, and carried the result of their union in their hue. Several of the old Tyneside blood were good strong useful cattle, with darning propensities, and no very dear purchases were they. The bulls came out better than many expected. Mr. Thornton, who sold the females, retired, and Mr. Wetherell finished the sale with the bulls. King Patrick excited some keen competition between Mr. Lambe, of Auburn, and Mr. Ridge, of Australia, who finally took him at 135 gs. Mr. Dickin got quite a show bull in Marmaduke, and at but 56 gs.; while Nobleman, a much fancied calf, goes to Ireland. Mr. John Angus took Golden King as an improvement to the Bearl herd, and Mr. Geo. Angus got one of the very best bred and most promising calves in King John, who is likely to sustain the dairy properties and wonderful uniformity of the few remnants of the old Broomley stock. Julius Cæsar, put in at 50 gs., was a cheap lot for Mr. Robinson; and Pioneer, an omitted yearling, by Jeweller (26460), from Susanna, of the Alwrick Castle blood, made 120 gs., which his massive frame and splendid quality deserved.

As a day nothing could have been more unfavourable. The wind blew in fierce gusts along the valley of the Tyne, carrying dust and dirt before it in clouds. Mr. J. C. Booth, who was surrounded with congratulating friends after his severe illness, occupied the chair, Mr. Grey the vice-chair, and Mr. Geo. Atkinson and Mr. Wetherell responded to the brief and all-sufficient toasts. Mr. John Atkinson, the elder brother, shows signs of the three-score years and ten, at which time he had decided to sell his stock, and he was within a couple of months of the period. It must have been a great day for him, friends and neighbours came round him from all parts. To his nephew, Geo. Potts, belongs much of the credit of bringing out the animals; and with the larger portion of the five thousand realized, Mr. John retires in the evening of life after a long, peaceful, successful day at the old tumble down farm of Peep-I-see, to the obscure little homestead at Seldom Seen, where peace and good wishes be with him.

COWS AND HEIFERS.

Castanet, roan, calved March 1, 1857.—Mr. Chirnside, 27 gs.
 Young Honeysuckle, roan, calved September 23, 1859.—Mr. Bolam 50 gs.
 Countess of Rothsay, red and white, calved March 3, 1860.—Mr. J. Curry, Edinburgh, 33 gs.
 Leopoldine 2nd, red and white, calved April 21, 1863.—Mr. T. Balner, Forehahers, 43 gs.
 Julia 2nd, roan, calved June 5, 1864.—Mr. J. Curry, 62 gs.
 [Her roan bull-calf.—Mr. N. Henderson, 50 gs.]
 Familiar Hamilton, white, calved July 15, 1864.—Major Cochrane, Gainford, 54 gs.
 Red Gem, red, calved October 23, 1864.—Mr. T. Marshall, Annan, 50 gs.
 Golden Rose, rich roan, calved November 1, 1864.—Mr. T. H. Miller, 32 gs.

Castanet 2nd, red, calved November, 1864.—Mr. R. M. Gumbleton, Ireland, 110 gs.
 Beauty 8th, white, calved January 1, 1865.—Mr. J. P. Haslam, 115 gs.
 Ringlet 2nd, roan, calved March 21, 1865.—Mr. T. H. Miller, 220 gs.
 Lady Mary, roan, calved May, 1865.—Mr. B. Spraggon, 35 gs.
 Moss Rose, red, calved September 8, 1865.—Mr. Knight, 29 gs.
 Primrose, roan, calved March 28, 1866.—Mr. R. M. Gumbleton, 68 gs.
 Gipsy Lass, roan, calved June 6, 1866.—Mr. J. Currie, 47 gs.
 Elegant's Bride, white, calved December 9, 1866.—Sir F. C. Constable, Bart., 50 gs.
 Rosette, roan, calved December 22, 1866.—Mr. H. Robinson, 145 gs.
 Lady of Conna Hill, red, calved January 18, 1867.—Mr. S. Campbell, 35 gs.
 Ruby 5th, roan, calved March 20, 1867.—Mr. J. Grimes, 42 gs.
 Her roan cow-calf.—Mr. S. Campbell, 10 gs.
 Meggy, roan, calved April 11, 1867.—Sir M. W. Ridley, 175 gs.
 Kathleen 2nd, roan, calved April 25, 1867.—Mr. R. M. Gumbleton, 53 gs.
 Duchess of Windsor, roan, calved May 11, 1867.—Major Cochrane, 105 gs.
 Leopoldine 3rd, red with a little white, calved September 19, 1867.—Mr. H. Robinson, 61 gs.
 Tulip 7th, red with a little white, calved January 22, 1868.—Mr. R. Emmerson, 63 gs.
 Bride of Windsor, white, calved February 25, 1868.—Mr. J. P. Haslam, 100 gs.
 Oxford Lass, roan, calved March 19, 1868, Mr. F. W. Low, Ireland, 51 gs.
 Castanet 3rd, red, calved April 9, 1868.—Mr. L. C. Crisp, Alwrick, 100 gs.
 Miss James, roan, calved April 15, 1868.—Mr. H. Robinson, 50 gs.
 Lady Jane, roan, calved May 5, 1868.—Mr. T. Balmer, 85 gs.
 Her roan cow-calf.—Mr. T. Balmer, 32 gs.
 Ringdove, roan, calved July 19, 1868.—Major Cochrane, 140 gs.
 Roan Duchess, roan, calved August 22, 1868.—Mr. T. Marshall, 70 gs.
 Oxford Cherry, red and white, calved in March, 1869.—Mr. J. R. Singleton, 44 gs.
 Village Belle, roan, calved in March, 1869.—Mr. A. C. Ridge, Australia, 105 gs.
 April Flower, white, calved April 17, 1869.—Mr. B. Spraggon, 32 gs.
 Primrose 2nd, red, calved May 8, 1869.—Mr. R. Jefferson, 50 gs.
 Bracelet, roan, calved May 14, 1869.—Mr. J. Kirton, 225 gs.
 Gipsy Queen, roan, calved July 4, 1869.—Mr. J. P. Haslam, 32 gs.
 Casket, red and white, calved September 14, 1869.—Mr. R. M. Gumbleton, 120 gs.
 Red Rosette, red, calved January 14, 1870.—Mr. R. Jefferson, 51 gs.
 Sonsie, red and white, calved October 29, 1869.—Mr. M. Davidson, 60 gs. Her red and white bull-calf.—Mr. Davidson, 10 gs.
 Primrose, 3rd, red with a little white, calved April 1, 1870.—Mr. J. C. Mappin, 41 gs.
 Castanet 4th, red and white, calved May 2, 1870.—Mr. J. Bowman, 125 gs.
 Lucretia 2nd, roan, calved July 15, 1870.—Duke of Northumberland, 150 gs.
 Julia 3rd, white, calved October 10, 1870.—Duke of Northumberland, 50 gs.
 Tulip 9th, red, calved October 23, 1870.—Mr. W. Thomson, Canada, 62 gs.
 Lady Fragrance, red and white, calved November 23, 1870.—Mr. D. Mc'Connell, Australia, 55 gs.
 Lady Annie, red and white, calved December 23, 1870.—Mr. Dickinson, 47 gs.
 Ruby 11th, roan, calved February 9, 1871.—Mr. F. W. Low, 55 gs.

Lady Caroline, roan, calved April 3, 1871.—Mr. D. McConnell, Australia, 31 gs.
 Roan Duchess 2nd, roan, calved May 2, 1871.—Mr. D. McConnell, 54 gs.
 Kathleen 3rd, roan, calved July 5, 1871.—Mr. R. Jefferson, 23 gs.
 Leopoldine 4th, red and white, calved July 18, 1871.—Mr. H. C. Pole Gell, 51 gs.
 Primrose 4th, roan, calved August 27, 1871.—Mr. H. C. Pole Gell, 70 gs.
 Countess, calved, roan, November 5, 1871.—Mr. J. P. Haslan, 24 gs.
 Lady Flora, roan, calved January 2, 1872.—Sir M. W. Ridley, 40 gs.
 Oxford Duchess, red and white, calved February 27, 1872.—Mr. B. Harrett, 11 gs.
 Queen of Windsor, red, calved February 28, 1872.—Major Cochrane, 50 gs.

BULLS.

Bumper 2nd (23107), red, calved June 4, 1870.—Mr. Wilkinson, 38 gs.
 Bismarek (28030), red, calved September 11, 1870.—Mr. Dixon, 45 gs.
 Under-Sheriff, roan, calved November 21, 1870.—Mr. Benson, 44 gs.
 King George (28968), roan, calved December 10, 1870.—Mr. Hawksby, 46 gs.
 Jolly Butler, roan, calved January 14, 1871.—Mr. Mareh, 37 gs.
 Marmaduke, red roan, calved March 2, 1871.—Mr. E. J. Dickin, 56 gs.
 King Patrick, red roan, calved March 4, 1871.—Mr. R. C. Ridge, Australia, 135 gs.
 Nobleman, roan, calved June 16, 1871.—Mr. F. W. Law, 80 gs.
 Fitz-Charles, roan, calved October 30, 1871.—Lord Ravensworth, 23 gs.
 King James, red and white, calved October 31, 1871.—Mr. R. Emmerson, 24 gs.
 Merry King, roan, calved November 12, 1871.—Hon. G. E. Lascelles, 32 gs.
 Golden King, roan, calved November 14, 1871.—Mr. J. Angus, 42 gs.
 Warlaby Lad, roan, calved November 27, 1871.—Mr. J. Wilson, 50 gs.
 Julius Caesar, red, with a little white, calved January 14, 1872.—Mr. W. Robinson, 50 gs.
 King John, roan, calved February 21, 1872.—Mr. G. Angus, 22 gs.
 Tielborne, red and white, calved February 21, 1872.—Mr. Moore, 11 gs.
 Victor, white, roan ears, calved February 25, 1872.—Mr. M. Davidson, 12 gs.
 Pioneer, roan, yearling (bull omitted).—Mr. Watson, 120 gs.

SUMMARY.

	£	s.	d.	£	s.	d.
57 Cows averaged	74	15	9	4,263	0	0
18 Bulls „	50	11	6	910	7	0
75 „	68	19	6	£5,173	7	0

SALE OF MR. LAMB'S SHORTHORNS,

AT HAY CARR HOUSE, LANCASTER, ON WEDNESDAY,
 APRIL 17, 1872.

BY MR. STRAFFORD.

These animals were removed from Mr. Lamb's residence at Hay Carr, and sold in a field near the Bay Horse Inn. The preface to the catalogue stated that the herd had been very carefully bred for a long period. About one-half the lots owe their origin to a fine old cow by Archibald (1652); there were also several descendants of Mr. Birchall's Luey Long, by Col. Towneley's Royal prize bull, The Duke of Lancaster, the tribe containing

some good sound blood that was fashionable in the earliest ages, and which traced to Bolingbroke, the sire of Favourite. The remainder consisted of some good old sorts, including Jessamine, of Mr. Wilson's Certainty tribe, by the unconquered Royal Butterfly (16862). She was the dam of Sir John, lot 6 of the bulls. The sires used had been selected with the greatest care and judgment, and comprised Mr. Bolden's Constantine (14318), by the 1,000 gs. Grand Duke; Majestic, bred by Mr. Slye, by Sir James (16980) from Sir C. Knightley's Chrysalis, by Earl of Dublin; Baron Bates, by a son of Third Grand Duke, from Mr. Bolden's favourite cow, Czarina, sold for 300 gs., and Grand Count 2nd, by Grand Duke of Lancaster, likewise a son of Third Grand Duke. The young stock were by Golden Duke, who is also by Grand Duke of Lancaster, and from a grand-daughter of Czarina. From the appearance of the various lots it seemed as if the farm had been overstocked. There was a good show of milk in a number of the cows, and many of them being newly calved; the calves selling as extra lots, though they made fair prices, reduced the average of the 40 head to £28 11s. 8d. Lot 2, Evergreen, a useful cow of the Archibald blood, made 45 gs. (Muekalt). Mr. Wilson gave the top price of the day, 60 gs., for Cherry Blossom, a wide, good cow. Jessamine, the Royal Butterfly-Certainty cow, a high-bred looking animal of amorous temperament, went very cheap to Mr. Towuley Parker, at 34 gs., her bull-calf realising 25 gs. (Sayer). Mr. Lowthwaite gave 43 gs. for lot 10, Cherry Bud, and Princess Amelia, a thin cow of excellent quality, made 40 gs. (Alderson). A roan heifer-calf from lot 1 fetched 25 gs., and 40 gs., the highest bull price, was given for Sir Richard, out of Cherry Blossom, lot 6, by Mr. Gardener. Several of the lots were the property of the Rev. J. Swarbrick, of Thurnham Hall.

SALE OF MR. JAMES DICKINSON'S
 HERD,

AT UPHOLLAND, WIGAN, ON THURSDAY,

APRIL 18TH, 1872.

BY MR. J. THORNTON.

We stood for a long time beside Prince of Prussia at Canterbury and Duke of Holland at Leeds, where they ran the first winners a close tie; indeed, few breeders, not alone tenant farmers, unknown as it were, could turn out a couple such bulls in so short a time, and Towneley had many a near squeak for it at the Royal North Lancashire meetings. High farming and potato growing prevail in that terrible mining district around Wigan, and the small Lancashire farmers might in their careful frugality teach a lesson to men of large estate. Mr. Dickinson went to Mr. Birehell in the dark ages of Short-horns and bought a bull calf, which was followed by another bull calf and two heifers, one of which, Amelia, dropped both Duke of Holland and Prince of Prussia, by Sir Charles Knightley's Pope Eye, bought at Fawsley, on that rainy day of 'Fifty-six. One or two purchases, not the most fortunate in the world, were made from Mr. Knowles; and from Capt. Gunter's cow, Fashion, bought in calf to Grand Duke of Wetherly, came Hyde Park. This bull was succeeded by Second Lord Wharfedale, who, after a short reign, was displaced by the Duke of Devonshire's Buxton, a noble-looking bull, to whose prowess half the herd was accredited. The catalogue comprised thirty-six head, most of which were descendants of lot 1, Rosalbina, a fine old Pope's Eye cow, and a good

milker. The beautiful condition and general uniformity of the whole herd were the admiration of the company, over which Mr. Drewry, of Holker, presided. There was indeed not an indifferent animal in the entire herd, and the result of twenty years' careful selection and judicious breeding was a herd such as few older breeders could bring out. Lot 1, Rosalbina, was reserved by leave of the company as a favourite cow of Mrs. Dickinson's. Her eldest daughter, the white Ada, also an excellent milker, and a fine even cow, went cheap at 40 gs. One of the best animals in the sale, lot 12, Acacia, was from her, a three-year-old of immense size, with style, abundant soft hair, and quality. She was a cheap investment for Mr. Upson, at 86 gs. Ada was also the dam of Duke of Westwood, a young bull that had already distinguished himself in the show yard, and promises to continue the success of his youth. Mr. Upson also got him a guinea dearer than his own sister, while Mr. Slater took his own brother, a roan January calf, at 27 gs. The Lucy tribe, springing from an extraordinary fine dairy cow, had been thirty years with Mr. Dickinson, and he had certainly kept up both the size and milk, adding thereto quality and style. Lot 2, Lucy 6th, a very fine cow, was bought for 45 gs. by Mr. Thom. He also took her Buxton daughter at 87 gs. Mr. Knowles, of Bolton, got her white two-year-old at 76 gs., and the top price of the day, 92 gs., was given by Mr. Smethurst for Lucy 10th, another Buxton heifer out of rather a plain dam, which went to Mr. Townley Parker at 35 gs. Buxton with all the vigour of his youth seemed a cheap lot at 78 gs. (W. Boulton), but he had well earned his cost at double that sum, for his heifers, although not quite evenly ribbed, were a very uniform good lot, with abundant hair, beautiful colours, and an elegant carriage and style hard to find in any but this strain. Some of the heifers went very reasonably, inasmuch as they were not long served, for having the promise of Mr. Musgrave's Royal Lancaster, a young bull of great promise, Mr. Dickinson kept them back. Still the general average of £51 9s. was a very satisfactory result, considering no great outlay had been made in female purchases.

SUMMARY.

	£.	s.	d.	£.	s.	d.
25 Cows averaged	53	9	4	1,336	13	0
9 Bulls	45	17	0	412	13	0
34 averaged	£51	9	0	£1,749	6	0

SALE OF MR. NEVETT'S SHORTHORNS.—

On April 8th about fifty head of Shorthorns, several being pedigree animals, were sold at Yorton Villa, Shrewsbury. They were the property of Mr. W. Nevett, who is endeavouring to combine heavy milking properties with pure blood. The cattle were, however, low in condition, the farm being considerably overstocked. Although there was a large attendance of buyers, the biddings, owing probably to the poor state of the animals, and most of them having newly calved, were languid. The cows went from 19 gs. to 41 gs., and heifers from 16 gs. to 30 gs. One or two bull-calves sold well, and some half-bred heifers better still, the 51 head averaging just over £26. Mr. Thornton was the auctioneer.

MR. GEO. MITCHELL'S DAIRY STOCK.—This sale was held at Newton Park Farm, Burton-on-Trent, on the 3rd April. The cows were very useful, and several of the best made 30 gs.; one in-calf cow going as high as 36 gs. The young stock were a good lot, and sold well, heifers in calf to pure Shorthorn bulls fetching as much as 30½ gs. Royal Master Butterfly 7th went for 39 gs., and the young bulls ranged from 15 to 31 gs.

SALE OF THE LITTLE HADDO SHORTHORNS.—

Mr. James Cochrane, Little Haddo, Foveran, Aberdeenshire, has had his annual sale of young Shorthorn bulls. The attendance of buyers was small, and from want of purchasers the sale passed off very stilly. Mr. Cochrane has had in his herd, for about a year and a-half, two of the best Shorthorn bulls in Scotland—viz., Baronet, bred by the Duke of Buccleuch, and Lord Henry, reared by Mr. Harret, Kirkwhelpington, Northumberland. They stood third and fourth at the recent show of the Highland Society, and besides many other prizes, gained the cup at Aberdeen—Lord Henry in 1870, and Baronet in 1871. All the young bulls catalogued had Lord Henry for sire, and they were undoubtedly the best lot that has ever come from Little Haddo. They were remarkably strong, well-conditioned, beautifully coloured, finely haired, and well shaped. Lord Arthur, Commander, Selim, and Juryman are especially promising bulls. The seven yearling heifers had also Lord Henry for sire, and, like the bull, were proofs of his excellent stock-getting qualities. The bulls averaged over £33 each. Probably the cheapest was Lord Byron, a very promising animal. Mr. Mitchell, Meikle Haddo, was judge; and Mr. Mitchell, St. John's Wells, Fyvie, auctioneer. The following is the sale-list: Lord Arthur, red roan, Mr. W. Warwick, Newmill, Fintray, 36 gs.; Jupiter (twin), red with a little white, Dr. Hay, Monyrine, Longside, 31 gs.; Commander, roan, Mr. Harvey, Pitearsie, Foveran, 34 gs.; Selim, white, Mr. Moir, Tarby, Ellon, 33 gs.; Bushranger, light roan, Mr. Morrison, Cairnanna, New Deer, 29 gs.; Admiral, white, Mr. Mortimer, Dumbellan, Huntly, 30 gs.; Champion, roan, Mr. Duncan, Aberdeen, 29 gs.; Juryman, red and white, Mr. Warwick, Newmill, 47 gs.; Felix, red and white, Mr. Stewart, Cairnhill, St. Fergus, 27 gs.; Lord Byron, roan, Mr. Feddes, Minnie, Foveran, 30 gs.; Tally-ho, white, Mr. Simpson, Auchtylair, New Deer, 27 gs.; Squire Udny, roan, Mr. Eddie, Belhelvie, 26 gs.; Lord Henry, white, taken in at 41 gs. Of the seven yearling heifers and three cows offered, only two of the former and one of the latter found purchasers, and these brought unsatisfactory prices.

SALE OF THE WIGGANTHORPE LEICESTERS AND SHORTHORNS.—

The flocks and herds of the late Mr. Robert Cattley were recently sold by auction by Mr. R. Boulton, of Malton, at the Wigganthorpe Park Farm. The Leicester sheep were descended from the flocks of Messrs. Borton, Souley, and Kendall, and the ewes were in lamb to rams of Mr. Borton's blood. The sale was attended by breeders from all parts, and about 2,000 people stood round the ring. The Leicester ewes ranged from 74s. to 102s., and averaged all round 91s. 3d. per head; the wether and gimmer hogs ranged from 60s. to 95s., and averaged all round 77s. 6d. per head. Cross-bred hogs made from 74s. to 82s., and South-down ewes in lamb 70s. per head. The Shorthorns were the residue of the herd which suffered so severely during the rinderpest. This part of the sale was the least satisfactory. Fat bullocks made from £23 to £27, cows from £19 to £26, heifers £17 to £22. There was a demand for horses and the keenest competition. Good-looking strong agricultural horses ranged from £40 to £63 per head, and other horses sold equally dear.

SALE OF SHORTHORNS AT KINNELLAR.—

The annual sale of young Shorthorn bulls and surplus cows bred by Mr. Campbell took place at his farm of Kinnellar, Aberdeenshire. Twenty good yearling bulls were catalogued for sale. Two, however, recently met with slight accidents, and were not offered; and a third, undoubtedly the finest of the lot, a rich roan, of fine shape and of excellent quality, was retained for service in the herd. The seventeen exposed were good as a whole—strong, well-bred, and in seasonable condition. They sold very readily, and realised high prices averaging close on £39 a-head. Their sires were Sir Christopher, a useful roan of the Booth blood; and Duke, a three-year-old, stylish, white bull, bred by the present owner, and the winner of the first prize at the Royal Northern Agricultural Society's shows at Aberdeen, besides several local show-yard honours. The average price obtained is the second highest of the season realised by the numerous breeders in the north of Scotland—the Sittony bulls only surpassing those of Kinnellar in price. Five good cows were catalogued, but they did not fetch very remunerative prices. The sale was largely attended, and Mr. Mitchell, Fyvie was auctioneer,

THE AGRICULTURAL HOTEL COMPANY.

The general meeting was held at the Hotel in Salisbury Square, Mr. H. Trethewey in the chair, when the following report was adopted:

In submitting the balance-sheet and accounts for the year 1871 to the shareholders, the directors have to congratulate them on the continued improvement in the prospects of the Company. The trade receipts for the past year have amounted to £15,177 16s. 4d., being an increase of £1,759 3s. 4d. on those of 1870. The interest on the mortgage, the debentures, and preference stock, together with the last instalment of arrears of interest on the latter, having been paid, there is still a balance of £1,094 13s. 4d. to the credit of the revenue account. Out of this the directors recommend a dividend of £2 per cent., free of income-tax, on the original capital, being declared. This will leave a balance of £257 1s. 4d. to be carried forward to the next account. The manager reports that the increasing business of the Hotel necessitates additional bed-rooms. From May 1st to December 31st last, he was obliged to refuse accommodation to 1,310 visitors, in consequence of the Hotel having been full. The directors therefore suggest the immediate construction of about 40 more bed-rooms. With this view they have made inquiries as to the possibility of their obtaining a lease of the additional ground required from the Earl de la Warr, the ground landlord, and they find there would be no difficulty in this respect. The directors are advised that to build and furnish the new rooms would involve an outlay of about £5,000. Should the shareholders concur in this suggestion, the directors would proceed with their negotiations, and the further consideration of the subject, and, when their plans are matured, would invite the shareholders to a special meeting, to consider them and to settle the final arrangements. The directors deeply regret to have to record the loss of their colleague, Mr. John Clayden, who died in July last. Mr. Henry Cheffins, of Easton Manor, Dunmow, Essex, has been elected by the directors to the vacant seat on the board.

Mr. H. Trethewey and the Rev. J. Browne, the retiring directors, were re-elected, and it was agreed to proceed with the proposal for extending the accommodation of the Hotel.

SALES OF SHARES IN AGRICULTURAL COMPANIES.—At the sale of the late Mr. John Clayden's shares at the Mart, by Messrs. Beadel, the highest price made for £10 shares in the Nitrate-phosphate or Blood-manure Company was £19 15s.; and for new shares of £10 each in the same Company, £16. The highest price for £10 shares in the Agricultural Hall Company was £13 15s.; and for £10 shares in the Agricultural Hotel Company, £5. Shares in the Royal Farmers' Insurance Company with £2 paid up made £3 5s. These prices show a deterioration in the marketable value of Agricultural Hall shares, which have changed hands at £17 a share; and as noticeable an improvement in Agricultural Hotel shares, consequent no doubt on the declaration of a dividend at the General Meeting on Tuesday.

SALE OF IMPORTED SHORTHORNS IN MELBOURNE, AUSTRALIA.—Vice-Chancellor, a roan bull, calved in April, 1870, made £157 10s.; Henry the First, a red bull, calved in the same month, £162 15s.; Felix, a red bull, calved in January, 1870, £126; General Hopewell, a red bull, calved in March, 1870, £315; Midshipman, a red bull, calved in May, 1870, £220 10s.; Gloster's Satellite, a red bull, calved in April, 1870, £126; Concord, a roan bull, calved in May, 1870, £141 15s.; Royal Rose, calved in June, 1870, £220 10s.; Grand Duke, a roan, calved in September, 1869, £126. Considering the high breeding of these animals, from some of the best stock of England, these prices are regarded by practical men here as low.

DEVONSHIRE CHAMBER OF AGRICULTURE.—At a quarterly meeting at Exeter, Mr. J. H. Kennaway, M.P., in the chair, Earl Fortescue moved the presentation of a memorial to the Government praying for some stringent measures to prevent the importation from Ireland of diseased stock. The motion was seconded by Mr. Whipple and carried. The three Bills on the public health—those of the Government, Sir C. Adderley, and Sir H. Selwin-Ibbetson—

were discussed, the Rev. W. Karslake moving that a petition be presented to Parliament in favour of Sir C. Adderley's measure. The motion was seconded by Earl Fortescue, but ultimately withdrawn; and, as proposed by Mr. J. Daw, and seconded by Earl Fortescue, it was resolved that, in the opinion of the Chamber, legislation for the sanitary improvement of the country was desirable, and that the consolidation of the law on the subject was essential.

LEICESTERSHIRE AGRICULTURAL SOCIETY.—The show this year will be held at Market Harborough, and Messrs. J. E. Bennett, J. H. Douglas, R. Worthington, jun., Jos. Perkins, J. S. Clarke, T. Willson, and E. K. Fisher, have been appointed a committee to meet the Harborough committee, and report to a future meeting.

LEICESTERSHIRE CHAMBER OF AGRICULTURE.—At the last meeting, the president, Mr. J. Croft, in the chair, Mr. W. Wright proposed the following resolution: "That this Chamber, without entering into the merits or demerits of the sanitary bill, and wishing by expressing its opinion to give every support to Sir Massey Lopez's proposed motion on April 16th, strongly protests against any further increase of the burdens upon the rates until there has been a thorough revision of local taxation." Mr. T. Wright seconded the motion, which was carried unanimously. Mr. Hamby proposed "That this Chamber considers the question of equal rates for carriage of goods on all railways is most important, and that when the subject of amalgamation of railways is discussed in Parliament it should be earnestly promoted." Mr. Willson seconded the motion, which was carried.

LINCOLNSHIRE CHAMBER OF AGRICULTURE.—At a meeting of the council of this Chamber held at Lincoln on Friday, Mr. Wm. Garfit in the chair; the following resolutions were passed: That a committee be appointed for the purpose of taking measures for circulating information upon the question of local taxation amongst the ratepayers of the principal towns of the county; That this council altogether disapproves of the proposed appropriation of educational endowments for secondary or middle-class education; That in the opinion of this meeting it is inexpedient that the highway district system should be adopted throughout the parts of Lindsey against the opinions of the ratepayers; That whilst this meeting approves of many of the provisions of the public health bill it disapproves of the means by which it is proposed to levy the expenses which would be incurred in carrying its provisions into effect; That in the opinion of this council it is very desirable that any additional expenditure rendered necessary by further sanitary legislation should be contributed from imperial resources according to the recommendation of the Sanitary Commissioners; and That the council approves with certain alterations of the bill, recently laid before the House of Commons by Mr. Clare Sewell Read.

THE GAME-LAWS COMMITTEE.—The first meeting was held on Friday, April 19, when Mr. Hunt was appointed chairman. The members of the committee were recommended to make themselves acquainted with the report of the previous, or "Bright's Committee," from which point the present inquiry may be assumed to proceed. Evidence will be taken more fully on the Scotch section of the subject, but some English witnesses will be the first called, immediately after the meeting of the committee on Tuesday, April 30th.

AGRICULTURAL LABOURERS' UNIONS.—Meetings have been called for Tuesday and Wednesday, the 30th April and 1st May, from 11 A.M. to 4 P.M., at Willis' Rooms, King Street, St. James', to discuss the following questions connected with unions among agricultural labourers: The influence of unionism upon the agricultural interests of this country. The regulations of agricultural unions—1. As to ordinary work. 2. As to work during harvest time. 3. As to classifying labour according to its efficiency. The establishment of a system of arbitration for disputes between the agricultural labourer and his employer. And such other questions as members of the conference may decide to put on the discussion paper. The chair will be taken by Mr. T. Hughes, M.P., and Mr. A. J. Mundella, M.P. The following have already promised to attend: Lord E. Fitzmaurice, M.P.; the Hon. H. G. Liddell, M.P.; the Hon. Auberon Herbert, M.P.; Sir Charles Dilke, M.P.; Sir Harcourt Johnstone, M.P.; Messrs. G. Dixon, M.P.; T. Hughes, M.P.; H. Faw-

cett, M.P.; E. B. Eastwick, M.P.; C. S. Read, M.P.; J. Caudlish, M.P.; T. Lea, M.P.; A. Johnstone, M.P.; J. White, M.P.; W. Morrison, M.P.; W. Allan (Amalgamated Engineers); E. Conlon (Operative Bricklayers); G. Potter; Lloyd Jones; R. M. Latham (Labour Representation League); R. Applegarth; J. Arch (Warwickshire Labourers' Union); H. T. Strange (Herefordshire Labourers' Union); and Canon Girdlestone. Lord Derby has declined an invitation to take part in the proceedings, considering that little good is likely to result from such a conference in such a place.

THE FARMERS AND THE MILK QUESTION.

At an adjourned meeting to consider how best to ensure the delivery of pure milk to the public, and to receive the report of a deputation which had been appointed to bring the problem under the notice of the Corporations of Manchester and Salford, from forty to fifty farmers were present.

Mr. H. NEILD (Worsley), who occupied the chair, said the deputation had been well received by the Mayors of Manchester and Salford, who had showed they were determined to enforce the delivery of pure milk within the two boroughs. The object of the farmers was not to deal with the price, but with the supply, for the price would regulate itself.

Mr. R. WHARTON, hon. secretary to the meeting, read communications which had been forwarded by the Town Clerks of Manchester and Salford. Two of them were as follows:

Town Clerk's Office, Manchester, April 5, 1872.

Dear Mr. Neild,—Since I saw you yesterday, I have had the opportunity of talking with the Mayor, and of hearing what passed at the interview which you and your friends had with him a few days ago. I can only repeat what I said to you yesterday—and in the expression of this opinion I have the hearty approval of the Mayor—that there is no doubt that the Corporation will be most willing in every way which may be found practicable to co-operate with yourself and friends in your endeavour to secure a supply of milk in a purer and less adulterated state than is now, it is feared, generally obtained for the district. What can, however, be done is a question of considerable difficulty, as you and Mr. Richards, who have had conversation with Mr. Leigh, our officer of health, upon the subject, are aware of the great importance of the object which yourself and friends seek to accomplish there can be no difference of opinion; and it appears to me you deserve the thanks of the community for agitating the question. After all, however, it is one of the many cases in which the public must to a great extent help themselves. In many cases the very price paid ought to be quite sufficient evidence to the purchaser that it is not *milk* but *water and milk*, if nothing worse, that is purchased. At the same time it is, no doubt, very desirable every effort should be made to inform the inhabitants who wish to obtain it, from whom pure—not diluted and adulterated—milk can be obtained. How this can be done is, as I have already said, difficult to determine. I am, &c.,

Jos. HERON, Town Clerk.

Borough of Salford.—Extract from the minutes of the General Health Committee, April 3, 1872: The Mayor reported that a deputation of farmers, consisting of Mr. Henry Neild (Worsley), Mr. Richards (Preston), Mr. Wharton (Pendleton), and Mr. Newton (Carrington), had waited upon him concerning the question of the quality of milk supplied to consumers in the borough, and suggested the desirableness of appointing a milk-analyst to test the quality. Resolved—that the question referred to in the report of the Mayor be deferred for consideration until the provisions of the Public Health Bill as to the appointment of a public analyst have been dealt with by Parliament, and that Mr. Neild be informed to this effect.

Another communication which Mr. Wharton read had been written by Mr. Andrew, Salford Town Clerk. He stated that the Public Health Bill alluded to in the extract from the minutes of the health committee would, in his opinion, very shortly become law. The Corporation of Salford would then be in a position to consider the scope of their present powers in conjunction with the additional powers conferred on them by Mr. Stansfeld's bill, and with every desire to further the

object which the deputation to the Corporation had had in view, they would go into the whole question.

The CHAIRMAN said Mr. Stansfeld's measure did not go quite far enough, because it was simply directed against adulterations which were injurious to public health. Milk, with water in it, might not be prejudicial to health. An effective plan had been adopted by the Bolton Corporation, whose powers were somewhat similar to those of the Salford Corporation, to put a stop to the watering of milk. Every week recently they had published the names of those persons who vended pure milk, and those who sold milk of inferior quality within their jurisdiction. This course had had a very good effect in Bolton. Heretofore people who had endeavoured to deal in pure milk had had no chance anywhere with those who sold impure milk. With regard to price, he thought a good effect might be produced if the method of distributing the milk was improved. There was nothing more expensive and unbusinesslike than for the carts of two or three different owners to be distributing milk in the same street. He considered that dealers in milk ought to be registered. If a man went about selling cabbages, potatoes, brushes, or almost anything else, it was necessary for him to procure a licence; and why should not milk-dealers be under the same obligation? He would not, however, compel milkmen to take out a licence which would cost them anything; they should merely be registered, in order that those who sold an impure article might easily be traced. Farmers did not desire to dictate to the public that they should pay this or that price; but, as he had endeavoured to show by figures at the last meeting, the cost of production last year was not similar to the cost of production this year. Not a single quart of genuine milk was at present to be obtained in London for fourpence. He had not yet been answered the question, Were there as many gills of milk sold daily in Manchester as there were people? (Cries of "No"). He thought there was not half nor quarter of a gill sold; and until the poor people could buy pure milk, the trade in it would not be so great as it was capable of being.

Mr. THOMAS NEWTON (Carrington) said he was afraid the public considered the object of the farmers was chiefly to obtain 4d. for every quart of milk they sold, and not to give pure milk. That was not so. The persons who formed the meeting desired solely the commencement of a trade in unadulterated milk, knowing that every article in the market must find its proper value.

Mr. RICHARDS (Eyde Dairy) suggested that in order to lessen the cost of distributing milk, which was something like three-farthings a quart—(A Voice: "Yes")—farmers should endeavour to trade in the districts nearest to them. Another reason in favour of this plan was that in summer milk had a tendency to turn sour when being conveyed any distance. He proposed that a committee should be appointed to confer with the authorities on the question in hand, to watch Mr. Stansfeld's bill, and to get inserted in it something in furtherance of the views of the meeting.

Mr. R. WHARTON seconded the motion, which was passed without opposition; and Mr. H. Neild, Mr. R. Wharton, Mr. James Kay, Mr. David Partington, and Mr. John Markindale were then elected a committee.

On the motion of Mr. Wm. CHALLONER, seconded by Mr. R. PARKINSON (Northenden), it was determined to form a Club, to be named the Manchester Farmers' Club, in which farmers could meet to discuss questions affecting their interests, and agree upon the course to be adopted whenever occasion should arise for combined action.

THE PRIZE FARM SYSTEM.—Mr. Gore Langton has offered the following prizes to his tenants for the best managed farms on his estates in Somersetshire and Gloucestershire:—For the best managed farm, exceeding 150 acres in extent, prize of £50; the second, £25. For the best managed farm of not less than 50 and not exceeding 150 acres in extent, prize of £30; the second, £15. The Judges are requested, in making their awards, to consider the general management of arable and grass land, the quality and suitability of the live-stock, the state of buildings, fences, gates, and roads. There are about twenty entries over which the judges—Messrs. E. Little, of Lanlith, Chippenham; and Mr. R. J. Newton, of Campsfield, Woodstock—will commence a tour of inspection about the beginning of May.

THE HEREFORDSHIRE AGRICULTURAL SOCIETY.

At the annual meeting on Wednesday, April 17th, owing to the notice of motion by Mr. G. Tomblings, having for its effect the rescinding of rule 5, which says that all cattle exhibited, extra stock excepted, must be of the pure Hereford breed, and the opening of the Society to the admission of Shorthorns and other breeds, in competition for special prizes that might be offered, there was a more than usually large attendance. Major Peplow, the president for the year, was in the chair.

The Rev. ARCHER CLIVE said that a meeting of the committee had been held that afternoon, at which the matter had been discussed, and at which it had been resolved to recommend that an alteration be made in rule 5, so as to admit for competition for special prizes offered by individuals—not by the society—cattle of other than the local breed; and it was announced, further, by the Secretary that letters in approval of Mr. Tomblings' proposition had been received from Mr. Chandos Wren Hoskyns, M.P., Mr. Biddulph, M.P., Mr. Arkwright, Mr. Rawlings, Stoke, Tenbury; Messrs. Kell, Ross; Mr. Morgan, Shrewsbury; Mr. C. Kearsey, Glewstone; Messrs. Robinson, Gloucester; Messrs. Tucker, Abergavenny; and Mr. G. Pye, Hereford. Letters had also been received by Mr. Tomblings from Messrs. J. and H. Day, of Crew, announcing their intention of offering £5 at the next show for Shorthorns, and from Mr. B. C. Tipper, of Birmingham, offering a like prize for the best fat ox not of the Hereford breed.

Mr. TOMBLINGS proposed his resolution as follows: "That whereas, owing to the altered state of proprietorship and tenancy in this county since the Society was

established, it is expedient that other breeds of cattle than the Hereford breed should be recognised in its operations; and I hereby move that rule 5—which says that all cattle exhibited (extra stock excepted) must be of pure Hereford breed—shall be rescinded and struck out, and that classes for Shorthorns and other breeds be introduced for special prizes that may be offered by their admirers or breeders." He had always been of opinion that far more money might be got for the Society if it were looked after, and if the show was in some respects less restricted; and, as the secretary had announced, he had himself received the offer of two £5 prizes from different counties for breeds of cattle other than local; he was privileged also to announce that Mr. Pulley was prepared to give a prize of at least £5, and perhaps more, for other breeds; and he had received a letter from Mr. Rankin offering most liberally to give £20 for four or five years to be distributed in prizes for Shorthorn and other breeds of cattle.

The MAYOR seconded the proposition, which on being put to the vote was carried by a large majority. No one voted against it, but there were some few who did not vote at all.

Mr. ROBINSON, Lynhales, could not help feeling that the Herefordshire show was not in a very flourishing condition. He was aware the balance was on the right side; at the same time he thought there was a want of animation and a want of life, which a little painstaking might considerably alter. The cost of working the Society was a cost for which might well be worked a very much larger concern, while of the £495 worth of prizes offered in the total, £116 only were really the gift of the Society proper. Mr. Robinson suggested a more active canvass for subscriptions, but no resolution was put.

AGRICULTURAL REPORTS.

REVIEW OF THE GRAIN TRADE DURING THE
PAST MONTH.

Every advantage has been taken by farmers of the favourable change in the weather. Out-door labours have been rigorously prosecuted, and there appears to be some likelihood that the backwardness of these operations will be somewhat remedied. The season, however, has so far advanced that wheat sowing has become rather precarious, and it has been resolved in some parts of the West of England to devote some portions of the land hitherto parcelled out for wheat for spring corn crops. It is generally admitted that the actual area under wheat will be smaller than was anticipated, owing to the unsettled character of the season, and the saturated state of the soil hindering sowing. Winter wheat generally looks well; it is very forward for the time of year, but there is mostly an absence of discolouration in the plant, and so far as can be seen it promises well. The dry weather of the past week has frequently necessitated the employment of the roller to stimulate the hold of the plant on the soil. In the pastures and meadow lands there is a good supply of grass, and cattle can readily obtain a fair feed.

Notwithstanding the more favourable weather, and the generally satisfactory accounts at hand from the agricultural districts, the trade has acquired a firmer tone, and wheat has sold at enhanced rates. In the face of declining stocks, and of the prospect of limited receipts from America and Europe, such a result was not anticipated. There is very little doubt that the weather will influence the trade to no small extent, but it is an open question whether, even with fine weather, prices will not be maintained at their present level. Late advices from New York state that the stocks there had been materially reduced, and at the Lake ports there had been a falling off in the accumulation, which the partial restoration of canal communication had so far failed to obviate. At the Russian ports also there is said to be a scarcity of wheat, and at Odessa the stock is reported to be not only deficient in

quantity, but to be of most inferior quality. Germany appears to have drawn too freely on her stocks, and is now endeavouring to replenish by purchases in the Russian ports. As regards the French demand, the inquiry recently has somewhat subsided, and with the absence of reliable statistics, it is hazardous to state whether her supplies will be sufficient to meet her requirements up to next harvest, which it is but just to state, judging from present appearances, promises to be an early one.

The spring corn trade has been more animated. There has been a strong inquiry for French barley, and the quotations have ruled 1s. per qr. higher. Maize and oats have also advanced 1s. per qr., and beans as well as peas have been fully as dear.

The following statement shows the imports and exports of grain, &c., into and from the United Kingdom since harvest, viz., from August 26th to April 20th, compared with the corresponding periods in the three previous years:—

	IMPORTS.			
	1871-2.	1870-1.	1869-70.	1868-9.
	Cwt.	Cwt.	Cwt.	Cwt.
Wheat	26,933,169	21,099,617	27,858,277	18,892,195
Barley	8,567,091	5,192,807	5,435,216	7,751,920
Oats	5,956,305	4,939,539	6,367,827	4,090,724
Peas	525,681	487,541	853,126	858,537
Beans	2,325,572	1,187,300	1,247,816	1,944,639
Indian Corn.....	12,279,910	9,698,746	13,028,340	9,005,324
Flour	2,118,352	3,068,405	4,334,368	2,712,836
	EXPORTS.			
Wheat	2,044,676	2,559,500	199,423	137,154
Barley	14,257	78,918	18,153	90,429
Oats	86,923	1,172,403	79,107	76,615
Peas	7,240	45,246	10,527	12,487
Beans	5,001	15,983	1,225	4,213
Indian Corn.....	20,647	56,980	13,604	881
Flour	47,385	1,294,960	14,118	22,422

The Continental grain trade has been firmer. Purchases have been more freely made, and both wheat and flour have tended upwards in value. In America, with decreasing stocks, wheat and flour have commanded more attention at full quotations. The quantity of wheat in sight at New York on the 6th inst. was 9,232,366 bushels against 8,509,332 bushels last year at the same period, corn 11,255,813 bushels against 3,979,323 bushels, and oats 5,218,696 bushels against 1,983,029 bushels.

QUANTITY OF GRAIN IN SIGHT AT NEW YORK, APRIL 6, 1872.

	WHEAT. Bush.	CORN. Bush.	OATS. Bush.
In store at New York	1,881,916 ...	421,856 ...	1,320,911
Albany	5,700 ...	600 ...	133,000
Buffalo (April 1)	369,249 ...	153,300 ...	379,839
Chicago *	1,514,391 ...	6,425,436 ...	1,075,082
Milwaukee	1,775,000 ...	736,901 ...	297,216
Duluth	50,000 ...	... ..	...
Toledo (April 1)	421,202 ...	999,875 ...	381,457
Detroit (April 1)	211,131 ...	80,551 ...	181,751
Oswego, *	230,000 ...	10,000 ...	500
St. Louis	219,913 ...	473,209 ...	235,982
Boston	6,788 ...	70,125 ...	107,114
Toronto (Apr. 1)	358,983 ...	2,250 ...	58,290
Montreal (Apr. 1)	165,400 ...	145,262 ...	58,676
Philadelphia *	115,000 ...	110,000 ...	120,000
Baltimore *	60,000 ...	140,000 ...	42,500
Amount in New York canals	1,118,203 ...	1,033,212 ...	653,075
Rail shipments for week...	99,460 ...	450,236 ...	173,303
Total	9,232,366 ...	11,255,813 ...	5,218,696

Total in store and in transit, Mar. 30, 1872...	8,915,160	10,699,110	5,118,174
Ditto, Mar. 23, 1872	9,273,110	11,422,217	5,571,080
Ditto, Mar. 16, 1872	9,460,636	11,976,884	5,576,908
Ditto, Mar. 9, 1872	9,673,660	11,598,314	5,834,753
Ditto, Mar. 2, 1872	9,819,211	11,236,536	5,911,184
Ditto, Apr. 8, 1871	8,509,332	3,979,323	1,983,029

* Estimated.

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

On the whole a fair amount of steadiness has been noticed in the cattle trade. The supplies of stock have been about an average, and the quality has generally been satisfactory. From our own grazing districts the receipts of beasts have been on a fair average scale, and the condition of the Scotch and Norfolk stock has been very good. A few prime Spanish beasts have also been on offer. As regards trade, steadiness has on the whole predominated, and, despite some temporary adverse fluctuations, prices have been characterised by a fair degree of firmness. The best Aberdeen Scots are now making 5s. 4d. to 5s. 6d. per 8lbs., but some tolerably good Norfolk stock has sold at 5s. per 8lbs.

With reference to sheep the receipts from abroad have been more liberal, and there has been at the same time a good show of English breeds, so that the total supplies offered have been more liberal. Although the demand has not been active, the trade has been firm, and prices have been supported. The best Down and half-breds, clipped, have made 5s. 10d. to 6s. per 8lbs.

Lambs have been scarce and dear, at from 9s. to 9s. 6d. per 8lbs.

Calves, the supply of which has been moderate, have sold steadily at full prices.

Pigs have been quiet, on former terms.

There is an abundance of grass in the pastures, and no difficulty is experienced in feeding stock.

The total imports of foreign stock into London during the past month have been as follows:

	Head.
Beasts	2,836
Sheep and Lambs	77,700
Calves	1,592
Pigs	91
Total	82,219

Corresponding period in 1871.....	49,562
1870.....	37,068
1869.....	48,925
1868.....	18,267
1867.....	36,925
1866.....	37,115
1865.....	27,816
1864.....	15,442
1863.....	16,021
1862.....	9,616
1861.....	11,119
1860.....	10,489
1859.....	8,888
1858.....	5,998

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	April. 1872.	April. 1871.	April. 1870.	April. 1869.
Norfolk, Suffolk, &c.	9,200	6,450	8,431	4,820
Other parts of England	1,500	2,100	2,542	2,666
Scotland	670	752	1,479	571
Ireland	150	390	725	353

The total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month have been as under:

	Head.
Beasts	21,145
Sheep and Lambs	174,600
Calves	2,278
Pigs	584

COMPARISON OF SUPPLIES.

April.	Beasts.	Sheep and Lambs.	Calves.	Pigs.
1871	10,973	89,045	545	540
1870	19,528	164,553	1,800	430
1869	18,849	144,760	1,329	585
1868	16,280	138,600	1,403	1,765
1867	16,250	113,770	977	1,805
1866	11,350	120,180	208	3,331
1865	19,670	92,850	1,279	2,602
1864	22,300	107,010	1,596	3,100
1863	19,290	113,060	1,341	2,540
1862	19,000	110,500	1,077	3,055
1861	17,140	102,630	497	2,662
1860	18,512	114,450	1,848	2,140
1859	11,850	110,114	420	1,990
1858	17,950	104,350	1,332	2,097

Beasts have sold at from 3s. 2d. to 5s. 6d., sheep 3s. 8d. to 6s., lambs 8s. 6d. to 9s. 6d., calves 4s. 4d. to 6s., and pigs 3s. 8d. to 5s. per 8lbs. to sink the oil.

COMPARISON OF PRICES.

	April, 1871.	April, 1870.
	s. d. s. d.	s. d. s. d.
Beef from	3 0 to 5 10	3 0 to 5 0
Mutton	3 2 to 6 0	3 0 to 5 0
Lamb	6 6 to 8 4	7 6 to 8 0
Veal	3 8 to 5 6	3 10 to 5 8
Pork	3 6 to 5 4	— —
	April, 1869.	April, 1868.
	s. d. s. d.	s. d. s. d.
Beef from	3 2 to 5 8	3 2 to 5 0
Mutton	3 2 to 6 6	3 4 to 5 6
Lamb	6 0 to 7 8	6 6 to 7 8
Veal	4 8 to 6 2	4 0 to 5 0
Pork	3 8 to 5 2	3 4 to 4 4

NORTH NORTHUMBERLAND.

We have most studiously refrained noting a line from our rural district until the lapse of time looks like the "eleventh hour." And it must stand recorded that up to this (19th April) our spring corn sowing is far from being completed; and with immense extra horse labour a large per centage of what has been got in is far from our usual nice finish. The season has proved altogether singular, all in a state of mud, with fresh foggy days, almost constant light rain, until about 20th March,

when we had immense falls of soft snow until the end of the month. On an ordinary farm we only could go on the stale ley furrow to sow oats on the 6th inst. A succession of cold wind has since prevailed, rendering all strong soils ploughed, or where sheep had been folded, as hard as brick-earth in two or three days. Oats on ley furrow are generally seeded. Land ploughed up since January for wheat takes immense extra labour, nor can we make it a good barley-seed bed: many a broad acre cannot be broken up until a rain-fall. On light dry soils the work is more forward; yet, taking all in all, we are much in arrear. Wheat shows a limited acreage; breadth was needed in autumn, and chance fields were sown in a very wet state during the first and second month, part (of early sorts) as late as March; but taking the district from which we write, it may be estimated at little if anything over half the usual extent. Autumn and also early winter wheat retain a good colour, with a full plant. The breadth left over for barley will be much in excess of ordinary seasons; but it now seems a question whether the land can be cultivated into a seed-bed; to say the least, it promises to be one of the latest seasons for spring cereals for many years past. Not so with pasture lands and seeds, which on all positions afford a rich full bite for the ewe flock. Straw, hay, turnips and potatoes extra plentiful. The latter blessings ought to make us all truly thankful for present supplies. The agriculturist, however, is and will be the pioneer for the million, and must look to the future. He is destined to toil and till the soil, and give bread to the eater, watch the seasons, sow and reap. After all bring the produce to market to assist in feeding the million. We were not always fed on foreign produce, and it might again chance that such *uncertain* supplies may be under embargo. We hope not in our days; yet, as a great, almost overgrown population, we ought to humble ourselves, and place more dependence on Divine Providence, Who giveth bread to the eater and water to the thirsty. Who has command and control over the seasons. We hope and trust that our "seed-time and harvest" will be vouchsafed, so far as we may have enough of home produce and to spare, as will suffice our fellow-subjects. It is really alarming, when all willing hands are fully employed, that they will not "let well be well," but keep and pay a bond of demagogues in idleness to sow discord among the willing, well-doing working classes, who are at present in greater request than at any period during the present century. Very stormy and all white, 9 a.m.—April 19.

AGRICULTURAL INTELLIGENCE, FAIRS, &c.

AYR FEEDING FAIR.—This fair was held in Ayr, and was crowded with farmers and servants. The fair was rather a stiff one, as servants in most cases were demanding high wages. Cotmen were asking as much as £30 per annum, and a good many were engaged at wages varying from £24 to £28, with the usual benefit; single ploughmen obtained from £11 to £12 for the half-year, young lads from £6 to £10, dairy-maids from £8 to £10, and young girls from £3 to £6.

BALCOMBE FAIR was attended by a much larger number of buyers than we have had for some years, and the supply of stock being rather large, and mostly in good condition, a good deal of business was done, but as many good lots were forestalled and sold before reaching the fair, there was some trouble in ascertaining the prices. We may, however, quote fresh two-year-old steers generally from £14 to £16, Mr. Tester, of Westop, making the latter price for his lot of sixteen; but Mr. Smith, of Paddockhurst, Worth, carried the palm with a beautiful lot of six pure Sussex two-year-old steers, that were purchased by Mr. Clutton, of Hartwood, at £23 each. Heifers were a ready sale, at from £13 to £15, and yearlings also fetched good prices. Larger beasts and barrens were much sought after at extreme rates, but milch cows, not being of good quality, were rather dull of sale, as were beasts of inferior condition, the principal business being done early, and good things cleared off in the morning. There were but very few sheep, and we did not learn the prices asked or obtained, but the supply of pigs was large, many of the sucklers

and shuts being of a superior kind, the former fetching from 18s. to 20s., and the latter from 23s. to 30s.

HOWDEN CATTLE FAIR.—The annual April cattle fair was held in Ilaligate. There was a good attendance both of buyers and sellers, a fair show of lean stock and young cattle, but very few fat beasts. Prices get higher and higher; young stock, especially, sold at higher rates than we ever knew them to fetch before, those of one-year-old bringings, in some instances, as much as £10 to £12, two-year-olds £15 to £18, three-year-old steers £15 to £20, fresh drapes for feeding sold readily at prices varying from £17 to £21, fat beasts realised 9s. to 9s. 6d. per stone. The show of calves was only small, and prices very high.

LOCKERBIE FAIR.—This show was held on Thursday. The first prize yearling Galloway bull sold at £28. The first prize Shorthorn yearling bull sold at £39. The other Galloway bulls sold at from £9 10s. to £18, and the Shorthorns at from £11 to £22. The fat stock sold well. Mr. Bell Irving's prize bullock sold at £35, and the heifer at the same price. The other stock sold at from £22 to £36. Half-bred hogs, 40s. to 55s., or 10s. to 12s. above corresponding market; Cheviot wedder hogs, 28s. to 30s., or 7s. to 8s. of advance. Only one lot of cross hogs in the market: they sold for about 55s. each.

MUIR OF ORD MARKET.—The Muir of Ord sheep market was held on Wednesday, being the most important of the season for hogs. Cheviot and black-faced were sold at a reduction from last month's market. Cheviot hogs were down from 4s. to 3s., and black-faced 2s. to 3s., caused by the sudden decline of mutton and wool in the southern markets. Half-breds almost maintained last month's prices. Black-faced wedder hogs were in greatest demand. Ewe hogs of every class were not much inquired after, and those sold at a still greater reduction than wedders. At the conclusion a great many lots remained unsold, owing to sellers not being willing to take the prices offered. Black-faced wedder hogs ranged from 22s. to 25s.; ewe hogs, 19s. 6d. to 25s.; Cheviot wedder hogs, 30s. to 33s.; half-breds, 27s. to 50s. each.

SHEPSTON - ON - STOUR HORSE AND CATTLE FAIR.—This far-famed fair for draught horses was held on Tuesday, and attracted a number of dealers from various parts of the kingdom, and although in point of numbers it was not so large as usual, owing to the scarcity of horses, yet rarely has there ever been exhibited such a show of first-class animals for size, symmetry, and colour. Mr. Wynn, of Grafton, near Stratford, was the purchaser of from twenty to thirty remarkably fine animals, which were re-sold to Mr. Barton, of Liverpool, at prices ranging from 30 to 50 guineas. Such was the demand for horses that anything worth notice fetched extraordinary prices. The trade amongst store Sheep was also good. Ewes and lambs, from 65s. to 95s. per couple; tegs, from 55s. to 80s.; barren ewes, 60s. to 70s. each; milch cows, £22 to £25; steers, £12 to £17 per head; mutton, 8d.; beef, 9d. per lb.

SOMERTON FAIR.—On Tuesday the attendance of buyers and sellers at our fair was not large, and the number of stock on offer was greatly below the average of former years. Fat beasts fetched from 12s. 6d. to 13s. 6d. per score; barreners, £14 to £20; cows and calves, £16 to £22. There was only one pen of ewes and lambs, which were sold at 72s. Store hogs scarce and dear, and sold at 50s. to 60s. each.

TRINITY MUIR TRYST.—At this old-established market the weather was cold and stormy, with raw showers. There was not the usual attendance, and the show of all classes of stock was much short of past years. Besides being short in number, there was not the heavy class of cattle which this market was famed for, neither were there anything of the sorts in two-year-olds for grass, which the Lothian and Fife stockholders were in the habit of picking up. Fat cattle were rather a stiff sale, with a clearance, at 11s. per Dutch stone for top quality. All store cattle were high, but this might be accounted for by the short supply of Irish stock. The few Irish shown were of inferior quality, and stirks sold from £4 to £7 each.

WAREHAM FAIR.—The annual cattle fair took place on Wednesday last, when fat beef made from 13s. to 13s. 6d. per score, heifers and calves £13 15s. to £22 5s. per head. Barreners £20 to £30 per pair, yearling bulls £12 to £15 per head, fat bulls £18 to £22 5s., Down sheep 45s. to 72s. per couple, fat lambs 45s. each.

WEYHILL FAIR.—This fair was held on Thursday. The

number of sheep penned was rather under the usual average, which must be accounted for by the shortness of stock and the great quantity of keep in this country. The trade for all descriptions ruled very slow at firm prices, and a great quantity changed hands at the following quotations: Couples 70s. to 76s.; tegs at 50s. to 60s. per head. A large pen of wether tegs belonging to Mr. Blake, of Redenhall, near Weyhill, made 65s. per head. The show of cows was large, and they sold at good prices.

WHITCHURCH FAIR.—The usual monthly fair was held on Monday, on which occasion there was a moderate display of horned cattle in the usual places, nearly all being soon disposed of at good prices. The pig market was well stocked, pork maintaining late prices. Mr. Cooper's auction mart was filled, the catalogue comprising nearly 120 head of fat and dairy cows and heifers, besides a large number of sheep, pigs, fat calves, lambs, &c. Messrs. Churton, Elphick, and Co., opened their new covered Smithfield in the Victoria Hotel-yard, the sale of cattle being a very fair one. Here also there were plenty of buyers, and the bidding in the several instances were animated.

WORCESTER FAIR.—A lively trade was done on Monday, nearly all descriptions of stock being purchased freely. Beef realised from 7½d. to 8d. per lb., and mutton from 7¼d. to 8½d. Store cattle were a little easier. Veal made 9d. per lb. Few horses on offer. Messrs. Hobbs sold fat cows at £27; fat oxen, £23 2s. 6d.; fat bull, £31; cows and calves, £25; fat calves, £5 17s.; fat sheep, £3 19s.; ewes and lambs, £4; fat lambs, £1 16s.; bacon pigs, £3 15s.; store do., £1 5s. 6d. Total, £2,041 10s. 6d. Mr. Bentley sold 60 head of fat and store cattle, 150 fat and store sheep, and 14 fat pigs. Beef made 8d. to 9d., and mutton 8d. to 10d. per lb. Pigs sold at last market rates. Mr. Higgs sold a quantity of stock at good market prices. Mr. Nathaniel Taylor sold 40 head of fat and store cattle, 10 fat calves, 200 fat and store sheep, and a number of fat and store pigs, which realised good market prices. John Hillman disposed of 41 head of fat and store cattle and 260 sheep and lambs. Fat cows made from £16 2s. 6d. to £28, or 7¾d. to 8½d. per lb. Mutton slightly depressed; shorn sheep 9d. per lb., in the wool 11½d.; one pen of fat shorn ewes made 89s. each; ewes and lambs, from 5s. 6d. to 82s. per couple. Mr. Hillman also sold seven sows with pigs and a quantity of store pigs, prices being about the same as at last market.

IRISH FAIRS.—**ENNIS:** Finished three-year-old heifers were bought up in lots at from £16 to £19 each. Fat bullocks brought from 14 to 17 guineas each. Milch cows and springers in demand at from £18 to £20; yearlings, £6 to £9. Sheep sluggish sale; best wethers, 64s. to 68s.; hoggets, 54s. The entire number of pigs did not exceed 500, and there was keen competition for bacon lots, fully 58s. per cwt. having been paid. Berwicks sold at 48s. to 50s.—**CHARLEVILLE:** There was a fair supply of cattle—prices from £12 to £20; sheep slack—one-year-olds brought from 18s. to 24s. A brisk demand for pigs at from 46s. to 50s. per cwt.

HOP MARKET.

BOROUGH, MONDAY, April 22.—The increased business noticed in our last has continued during the past week, rendering holders of stock more confident; and although prices show no advance considerably more firmness is observable. Factors' boards are very meagrely supplied, consisting principally of medium hops, choice grades being exhausted. Colory samples of yearlings are in fair request at late rates. Foreign markets are firm. Almost are in good demand.

Mid and East Kent	£10 10	£12 12	£17 0
Weald of Kent	8 10	9 9	10 10
Sussex	7 15	8 8	9 9
Farnham and country	11 11	13 0	16 0

YEARLINGS.

Mid and East Kent	£3 0	£4 4	£6 10
Weald of Kent	3 0	4 0	5 15
Sussex	3 0	3 10	5 5
Farnham and country	—	6 0	7 0
Olds	1 5	1 10	2 0

POTATO MARKETS.

SOUTHWARK WATERSIDE.

LONDON, MONDAY, April 22.—During the past week the arrivals coastwise have been moderate. The last four days the weather has been cold for the season, which has caused a better demand at the following quotations:

Yorkshire Flukes	110s. to 140s.
Regents	100s. to 120s.
Dunbar and East Lothian Regents	110s. to 140s.
Perth, Forfar, and Fife	100s. to 130s.
Rocks	100s. to 110s.
Kent and Essex Regents	90s. to 110s.
Rocks	90s. to 100s.
French Whites	60s. to 70s.

BOROUGH AND SPITALFIELDS.

LONDON, MONDAY, April 22.—The supplies of potatoes have been less extensive. There has been a moderate demand at about late rates. The imports into London last week consisted of 2 baskets from Rotterdam, 45 tons from St. Malo, 98 tons from Dunkirk, 47 tons from Dabouet, and 289 boxes from Lisbon.

Flukes	150s. to 170s. per ton.
Victorias	140s. to 160s. "
Regents	140s. to 160s. "
Rocks	110s. to 130s. "

SCOTCH SHORTHORNS.—The cattle, when housed at all, are very well housed. The buildings which contain them have all been erected by Lord Kinnaird himself upon his own plan. Their main features are space, light, cleanliness, and abundant ventilation and air, without the possibility of draught. But when I was there they were only partially used for the bulls, young and old, and a few of the younger females. The rest were all out in the fields, the majority of them day and night, braving, without shelter, the keen cool air of a Scotch November on the Eastern coast. With the exception of a very few which have been shown, or are intended for show, they earn their own living. Some of the Great Hope heifers, I thought, had been treated even too severely, for they had spent the summer on the inferior pasture on the high Rossie braes. They are hard and healthy. The herd is very uniform in its character. It may well be so, for it has been begun, carried on, and perfected, during the long period of 36 years, under the constant attention and supervision of its owner. Whatever is done there, he is the doer of it; and it may well improve, for Lord Kinnaird has constantly refused to sell his best females. There have been no periodical sales, but the butcher has had the weedings. Only this last summer the long-pursed Americans came, saw, admired, and wished to buy some of the Great Hope heifers; an offer which was steadily declined. It will be seen what great use has been made for many years past of the best Booth bulls. The result might have been anticipated. This herd now contains far more of the Booth blood than any other herd in Scotland; and its cattle display that majestic massiveness so peculiarly characteristic of Warlaby descent. They are generally beautifully symmetrical and neat, of good size, and have also hair and touch of the best kind. To this point particularly Lord Kinnaird has given his attention; and they who, possibly through ignorance, suppose that superiority of hair and touch is confined to Shorthorns of one strain of blood only, may be recommended to go to Rossie Priory, and there learn to remodel their erroneous creed. The Herd they will see there is one of which any country might be proud, and which, it is to be hoped, will leave its mark in Scotland.—*The Rev. J. Storer on the Rossie Herd.*

FARM ACCOUNTS.—The Committee of the New York State Agricultural Society has just awarded a silver medal to Mr. Alexander Jemmett, of Murrell Hill, Binfield, for his system of keeping Farm Accounts.

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

With rather less rain than is usual, April, on the whole, has been a fine and seasonable month, though frosty nights, especially on the 19th, cut some portion of the wall and orchard fruit; and the nuts, which were tempted early into blossom, must have seriously suffered. The wheat also in some localities has been less favourably spoken of, and the great quantity of rain which fell in January too strongly bound together the clay soils to give much promise of a crop. It is also alleged that less wheat than usual has been sown, which must tell at harvest time. The stores, however, of green meat, from the great mildness of the season, have been superabundant, which, however serviceable at the table, would have been doubly valuable but for the diminished stores of cattle and sheep. The barley sowing, which at one time was seriously threatened, has proceeded diligently in a drier soil, and the grass lands never looked better, notwithstanding the frequent visits of frost. We are now approaching the season of rapid growth, when the general appearance of the crops will tell their own tale. But the question of stocks is disputable ground. For the last five weeks the deliveries in the 150 towns, which make them up, have been 28,000 qrs. weekly below what they were in 1871. This must either be caused by dissatisfaction with prices, which lately have been 3s. 7d. per qr. less than last year, or from diminished stores, which seems to us the more probable reason. And if this be the case, as we have still four months to provide for, the circumstance of large stocks of foreign still on hand will be insufficient to prevent a rise, unless heavy arrivals set in, more especially as country millers have of late been drawing largely upon them. The fluctuation of prices for the last five weeks have left values pretty much as they were, though closing upwards. It is, therefore, very important to know what are the stocks of the great shipping ports on the Continent, and in America, and what encouragement is there to ship freely. In Germany they are short, and high priced; much, therefore, is not to be expected from the Baltic. At New York they have been rising, and though an abundance of maize may come forward from the large gatherings of 1871, there is not the same surplus of wheat. Will Southern Russia do much? The answer is, that at Taganrog they have preferred shipping fallow to wheat, and Odessa really seems the only overdone port. But a serious impediment to shipments exists there in the great inferiority and bad condition of the wheat in store. The best qualities won't pay at present rates, and if much inferior comes here it will have to be sold dog-cheap ex ship, or be certainly burdened with heavy granary expenses. France, too, may yet want a good deal, and has been dearer lately. So altogether our impression is that a five shillings advance, or even more, is in prospect before harvest. The following prices were recently paid abroad: White wheat at Paris 60s., red 58s. In Belgium rates were 50s. to 58s. Wheat at Maestricht 55s., at Rotterdam 57s., Polish at Amsterdam 59s., wheat at Lausanne 58s. 6d., at Dantzic and Konigsburg fine high mixed 61s. 6d. cost, freight, and insurance. Wheat at Valladolid 51s., at Leghorn 58s. 6d., Milan 59s., Ghirka at Genoa 56s., red wheat at Philadelphia 55s. 10d. per 480lbs., white 65s. 4d., red spring at Chicago 41s. 6d., at New York 52s. per 480lbs.

The first Monday, commencing on the 25th of

March, opened with small English supplies; but the foreign arrivals were liberal. There was but a limited show of fresh samples during the morning on the Essex and Kentish stands, which, being in improved condition, factors hoped to obtain a rise of 1s., but they soon found millers in no disposition to meet their views, and only the previous Monday's rates were practicable. The business done in foreign was on a small scale, at rather better prices than were then paid for fine red qualities; but cargoes on the coast recovered 1s. to 2s. per qr. Though the country trade was interfered with by the Easter holidays, the early part of the week being wintery gave it more tone; but Liverpool was an exception, Tuesday's market being down 2d. per cental. At Edinburgh there was a fair demand for wheat at the previous currency, and though business was not brisk at Glasgow, some descriptions of foreign were 6d. to 1s. per qr. higher. At Dublin there was a steady trade, at unaltered rates.

The second Monday being a holiday in London no report could then be made, but on the following Wednesday the market was unaltered.

The third Monday opened on small English supplies, but with good arrivals from abroad. The morning's show of samples from Essex and Kent was again on a small scale, in moderate condition. With the return of damp and mild weather, however, there was a decline in value of 1s. on all qualities of English, and the slight improvement noted on the previous Friday, was then succeeded by a similar decline. Cargoes off the coast also lost favour, and relapsed into dulness. Short supplies again being general at the country markets, dry samples were rather more in request at full prices, though, where nothing but damp and poor qualities appeared, there was a decline of about 1s., as at Leeds and Stockton. Liverpool was unaltered at the first market, but on Friday there was a decline of 1d. per cental. With small supplies at Edinburgh, wheat was 1s. dearer, and prices against buyers at Glasgow. At Dublin the supplies of native wheat were small, and no change of value was reported.

The fourth Monday opened on small English and only moderate foreign supplies. The show of fresh samples during the morning from Kent and Essex was very small, but the condition was much improved by fine weather; yet factors could only report a firm market for their best samples, and the sale was far from brisk. The only change to be noted in the foreign trade was an occasional improvement on the finest white samples, such being in improved demand. Good red also was firm, but low sorts continued in neglect. Cargoes afloat, though not numerous, were without improvement in price. With drying winds that greatly improved the condition of samples in the country, the trade had a healthier aspect, and several places noted an advance of 1s. per qr., as Hull, Ipswich, Stockton, Wakefield, Doncaster, Gloucester, Newcastle, Reading, Norwich, &c. Liverpool, though unaltered on Tuesday, noted an advance of 2d. to 4d. per cental on Friday. At Edinburgh, wheat was 1s. to 2s. dearer, and firm at Glasgow, with a fair demand. Prices at Dublin were rather in sellers' favour, both for native and foreign samples.

The fifth Monday opened on small English and moderate foreign supplies. The show of samples from the

near counties was very limited, and very much improved in condition. Factors were thus enabled to establish an advance of 1s. per qr. on all good qualities, but the sale was by no means brisk. In foreign, the business done was scarcely equal to the previous Friday, but fully 1s. per qr. more was realised on all good qualities, and fine Russian occasionally brought 1s. to 2s. advance. The floating trade was quite as dear for all qualities in good condition. Edinburgh quoted an advance of 1s. to 2s., and Glasgow 1s., Dublin being firm, and the country markets generally established fully 1s. advance.

The imports into London for five weeks were 17,373 qrs. English wheat, 75,258 qrs. foreign, against four weeks' imports for the same period in 1871, viz., 20,279 qrs. English, 69,912 qrs. foreign. The London exports were 1,136 qrs. The imports into the kingdom for five weeks ending 13th April were 3,066,275 cwt. wheat, 285,900 cwt. flour. The London averages commenced at 56s. 3d., and closed at 56s. 7d. The general averages began at 55s. 5d., and ended at 53s. 11d.

The flour trade throughout the month has scarcely varied, the only difference being that the last two markets were firm, and the three previous dull. The arrivals from the country have continued fair and remarkably equal week by week, but millers complain that the manufacture has not paid them, wheat in the country being relatively dearer than in town, and purchases of foreign in London being too much burdened with the expenses of transit. Good Norfolks have been worth 38s., and first-rate marks proportionately more. Fair barils 29s., extra to 31s.; but these prices not having suited New York, nothing has arrived for the last three weeks. There is, however, a stock in London, but its quality being mostly inferior, it has no chance against country sorts. Town millers still make 50s. as their top price. The imports for five weeks were 85,571 sacks English, 13,222 sacks 12,877 barrels foreign, against 78,694 sacks English, 7,014 sacks 67,896 barrels foreign last year.

The supplies of maize from America being far less than expected, this grain has somewhat recovered from its late depression, being fully 1s. 6d. per qr. dearer. Mixed New York was worth 29s. 6d., white Galatz 33s. to 33s. 6d.; but when the canals are open larger shipments may be expected, and perhaps lower rates. The five weeks' supply for London has been 32,393 qrs., against 17,465 qrs. in 1871.

The arrivals of British barley have been limited as the season has been approaching its close; but the foreign supplies have been heavy, and consisted principally of good useful quality from France, which coming more liberally than anticipated caused a sudden and heavy depression for a time—say, 2s. to 3s. per qr. From this, however, this quality has partially recovered: what was at one time sold for 26s. per qr. has become worth 29s. Grinding sorts not having been so abundant, were not depressed in the same way, and have been pretty steady as to value all through, fair quality being worth 26s. per qr. No dependence can now be placed on the value of fine malting descriptions, and this sort seems pretty well used up. The imports into London for five weeks were 6,324 qrs. British, 71,459 qrs. foreign, against 5,306 qrs. British, 18,017 qrs. foreign for four weeks in 1871.

The malt trade, with the advance of spring, as usual, has been very quiet, but prices have kept nominally the same, and closed firm.

The peculiar character of the present season leading to the expectation that there would be an unusually early opening of the Baltic, made dealers in oats generally very apprehensive that enormous supplies would speedily be on their way to London. The impression paralysing the

hands of buyers brought this grain to a low ebb in point of value, but the month has seen a recovery of fully 2s. per qr., 38lbs. Swedes, which were selling with difficulty at 18s., being now worth fully 20s., and other sorts in proportion. The granaries, too, were much lightened during the depression, as holders then seemed determined to sell. But supplies being only moderate served to show that foreign shippers were little disposed to make sacrifices, though the improvement of fully 12 per cent. may bring larger arrivals shortly. The imports into London for five weeks were 963 qrs. English, 146,527 qrs. foreign, against 1,438 qrs. English, 660 qrs. Irish, 121,221 qrs. foreign for four weeks in 1871.

Beans lost 1s. value on the third week, during a period of good foreign supplies, but this is the only difference of value to be noted, and the late improvement in maize seems calculated to prevent a further depression in this grain, though we have reached the period when consumption begins to fall off. Ticks and Mazagans are worth about 32s., harrows 37s. to 38s., small 40s. to 44s., Egyptians 31s. The imports into London for five weeks were 3,154 qrs. home growth, 9,846 qrs. foreign, against 1,575 qrs. English, 5,227 qrs. foreign last year for four weeks.

Peas have been in very limited request through the month, but the value has not changed, being but low at the commencement, boilers 38s. to 40s., hog feed 32s. to 38s. Farmers now send up so little that they must find it more worth while to consume them at home, or it may be that stocks are pretty well exhausted. The imports into London for five weeks were 985 qrs. English, 2,584 qrs. foreign, against 522 qrs. English, 533 qrs. foreign in 1871.

With moderate arrivals of linseed this grain has maintained its high value all through the month, and it still seems likely to rule dear for some time, crops abroad not proving abundant, and its value for feeding being better known than formerly. The imports into London for five weeks were 42,890 qrs., against 12,301 qrs. in 1871.

The seed trade, now drawing to its close, has proved most unsatisfactory. The failure of the crop of cloverseed here and in France it was thought would force prices up very high. The best red of home growth, from scarcity, has indeed fetched high rates, but there was no quantity, and American has been a losing game, it now being scarcely worth 54s. Such a mild winter and such an abundance of green stuff, with so few beast to consume it, was the ruin of the trade, and it was the same if not worse with spring tares.

BRITISH SEEDS.

Mustard, per bushel, brown 14s. to 16s., white 8s. to 9s. 6d.	
Canary, per qr. new 52s. 54s. old 52s. 54s.	
Cloversd., new red and dark purple 85s. 90s., com. 64s. 72s.	
Coriander, good, per cwt.	56s. 72s.
Tares, winter, new, per bushel.	5s. 3d. 5s. 6d.
Trefoil, old and low 16s. to 20s. new fine 32s. 34s.	
Ryegrass, per qr.	28s. 32s.
Linseed, per qr. sowing 68s. to 70s., crushing 60s. 63s.	
Linseed Cakes, per ton	£11 5s. to £11 10s.
Rapeseed, per qr.	86s. 90s.
Rape Cake, per ton	£6 10s. 0d. to £6 15s. 0d.

FOREIGN SEEDS.

Cloverseed, red 48s. to 56s. white 68s. 80s.	
Hempseed, small 38s. to 49s. per qr. Dutch 45s. 46s.	
Trefoil	16s. 20s.
Ryegrass, per qr.	28s. 30s.
Linseed, per qr. Baltic 68s. to 61s. Bombay 63s. 64s.	
Linseed Cakes, per ton.	£10 15s. to £11 10s.
Rape Cake, per ton.	£6 10s. to £6 15s.
Rapeseed, Dutch.	72s. 76s.
Coriander, per cwt.	23s. to 24s.
Carraway ,, new.	32s. 33s.

CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.

	Shillings per Quarter.	
WHEAT, new, Essex and Kent, white.....	56	62
" " " " red.....	60	65
Norfolk, Lincolnsh., and Yorksh., red.....	50	55
BARLEY.....29 to 31.....Chevalier, new.....	36	41
Grinding.....28 29.....Distilling.....	29	33
MALT, Essex, Norfolk, and Suffolk.....	61	68
Kingston, Ware, and town-made.....	63	68
Brown.....	51	56
RYE.....English, feed 21 to 25.....	36	39
OATS, English, feed 21 to 25.....Potato.....	26	32
Scotch, feed.....00.....Potato.....	00	00
Irish, feed, white 18.....21.....Fine.....	22	24
Ditto, black.....18.....20.....Potato.....	27	30
BEANS, Mazagan.....30.....32.....Ticks.....	30	32
Harrow.....33.....34.....Pigeon.....	36	43
PEAS, white, boilers.....36.....40 Maple 36 to 39Grev. new.....	32	33
FLOUR, per sack of 280lbs., best town households.....	45	50
Best country households.....	39	42
Norfolk and Suffolk.....	37	38

FOREIGN GRAIN.

	Shillings per Quarter.	
WHEAT, Dantzic, mixed.....56 to 60.....extra.....	61	62
Königsberg.....55.....59.....extra.....	60	61
Rostock.....55.....56.....fine.....	57	58
Silesian, red.....53.....55.....white.....	67	68
Pomera., Meckberg., and Uckermk., red.....	54	56
Russian, hard, 42 to 44.....St. Petersburg and Riga.....	52	52
Danish and Holstein, red 52.....55.....American.....	55	56
Chilian, white 61..... Californian 61..... Australian.....	60	62
BARLEY, grinding 21 to 26.....distilling and malting.....	27	30
OATS, Dutch, brewing and Polands 17 to 25.....feed 19.....	19	19
Danish and Swedish, feed 18 to 21.....Stralanda.....	17	21
Canada 17 to 19, Riga 17 to 20, Arch. 18 to 20, P'sbg. 18.....	21	21
TARES, Spring, per qr.....small 34.....large.....	42	42
BEANS, Friesland and Holstein.....	32	34
Königsberg.....30 to 31.....Egyptian.....	30	31
PEAS, feeding and mapla.....32.....36.....fine boilers.....	36	40
INDIAN CORN, white.....32.....33.....yellow.....	28	30
FLOUR, per sack, French.....00.....Spanish, p. sack.....	00	00
American, per brl.....24.....25.....extra and d'ble.....	26	28

IMPERIAL AVERAGES

For the week ended April 13, 1872.

Wheat.....	48, 53½ qrs.	53s. 11d.
Barley.....	17, 969	36s. 6d.
Oats.....	4, 143½	21s. 8d.

COMPARATIVE AVERAGES.

Years.	WHEAT.		BARLEY.		OATS.	
	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.
1868.....	38,958	73 8	8,750¼	43 10	3,653½	29 0
1869.....	55,960½	46 8	12,083½	44 6	3,095	27 7
1870.....	62,046½	42 10	14,615½	35 2	3,566½	21 5
1871.....	66,115½	57 6	15,387	36 5	4,309½	26 5
1872.....	46,536½	53 11	17,969	38 6	4,143½	21 8

AVERAGES

FOR THE PAST SIX WEEKS:

WEEKS:	Wheat.		Barley.		Oats.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
March 9, 1872.....	55 8	37 11	23 2	22 3	19 10	11 10
March 16, 1872.....	55 5	37 7	22 11	22 3	19 10	11 10
March 23, 1872.....	54 6	36 6	21 10	22 3	19 10	11 10
March 30, 1872.....	54 2	37 0	22 1	22 3	19 10	11 10
April 6, 1872.....	54 0	35 11	22 3	21 8	19 10	11 10
April 13, 1872.....	53 11	36 6	21 8	21 8	19 10	11 10
Aggregate of the above.....	54 7	36 11	22 4	21 4	19 10	11 10
The same week in 1871.....	57 6	36 5	26 5	26 5	19 10	11 10

FLUCTUATIONS in the AVERAGE PRICE of WHEAT.

PRICE.	March 9.					Mar. 16.					Mar. 23.					Mar. 30.					April 6.					April 13									
	55s. 8d.	55s. 6d.	54s. 6d.	54s. 2d.	54s. 0d.	55s. 8d.	55s. 6d.	54s. 6d.	54s. 2d.	54s. 0d.	55s. 8d.	55s. 6d.	54s. 6d.	54s. 2d.	54s. 0d.	55s. 8d.	55s. 6d.	54s. 6d.	54s. 2d.	54s. 0d.	55s. 8d.	55s. 6d.	54s. 6d.	54s. 2d.	54s. 0d.	55s. 8d.	55s. 6d.	54s. 6d.	54s. 2d.	54s. 0d.					
55s. 8d.																																			
55s. 6d.																																			
54s. 6d.																																			
54s. 2d.																																			
54s. 0d.																																			
53s. 11d.																																			

PRICES of BUTTER, CHEESE, HAMS, &c.

BUTTER, per cwt.: s.	s.	CHEESE, per cwt.: s.	s.
Dorset.....140 to 146	146	Cheshire.....	52 to 84
Friesland.....124	130	Dble. Glouc., new.....	64 88
Jersey.....112	124	Cheddar.....	64 88
Friesh., per doz.....	12 15	American.....	68 76
BACON, per cwt:		HAMS: York.....	94 98
Wiltshire, green.....	74 76	Cumberland.....	92 96
Irish, green, f.o.b. 72	76	Irish.....	92 98

CHICORY.

DELIVERABLE FROM WHEAT IN BAGS, EXCLUSIVE OF DUTY.					
Harlingen	£10 15 to £12 0	Antwerp	£ 0 0 to £0 0	0	0
Bruges	12 5 13 0	Hamburg	0 0	0	0

TIMBER.

BALTIC FIR TIMBER.			Christiana & Sannet deals, white and yellow.....		
Period 50 cubic feet.			10 0 to 12 10		
Riga.....	s. d.	s. d.			
Dantzic and Memel.....	65	0 to 67	Second do..... 0 0 0 0		
Crown.....	80	0 to 90	Dram & Fredrickstadt battens, do..... 0 0 0 0		
Best middling.....	65	0 to 75	Dram 6½-inch do..... 0 0 0 0		
Good middling & second.....	60	0 to 70	Gothenb'g, gdstocks..... 10 0 11 0		
Common middling.....	50	0 to 54	Common..... 8 10 9 15		
Small, short, and irregular.....	40	0 to 50	Gefle and Swedish 11-foot deals..... 10 10 12 10		
Stettin.....	60	0 to 55	Swedish deals and battens, long mill-sawn..... 7 10 9 10		
Swedish.....	47	0 to 53	Dantzic, crown deck, 11-foot 8-inch Brack..... 1 0 1 5		
Small.....	49	0 to 44	Brack..... 0 14 0 17		
Swedish & Norway balks.....	38	0 to 42			

AMERICAN PITCH PINE.			LATHWOOD.		
United States..... 0 0 0			Per cubic fathom.		
			Petersburg..... 9 0 10 0		
			Riga, Dant., Memel, and Swedish..... 5 0 7 0		

BALTIC OAK TIMBER.			FIREWOOD.		
Per log 15 cubic feet.			Per cubic fathom.		
Memel, crown.....	110	0 to 130	Swedish, red deal ends..... 4 5 4 15		
Brack.....	80	0 to 105	Norway, red & white board..... 3 5 4 0		
Dantzic and Stettin, Crown.....	100	0 to 120	Rounds and slabs..... 2 10 3 0		
Brack & unsquared.....	75	0 to 95			

WAINSCOT.			OAK STAVES.		
Per log 15 cubic feet.			Per mille pape.		
Riga, crown.....	110	0 to 110	Memel, crown..... 200 0 0 0		
Brack.....	75	0 to 80	First brack..... 165 0 175 0		
Memel and Dantzic, Crown.....	75	0 to 80	Dantzic, Stettin, & Hambro' full-siz'd crown..... 130 0 150 0		
Brack.....	40	0 to 47	Canada, stand. pipe..... 92 10 10		
			Funchon, ½ 1,200 pieces..... 28 0 0 0		
			Bosnia, single brl., ½ 1,200 pieces..... 30 0 32 0		
			United States, pipe 45 and extra..... 35 0 60 0		
			Hoghead, heavy..... 35 0 45 0		
			Slight..... 30 0 32 0		

DEALS AND BATTENS.			Per Petersburg standard hundred.		
Archangel.....	12	10 14 10			
Seconds.....	9	10 10 10			
Petersburg.....	12	10 13 5			
Wyburg.....	9	15 10 6			
Sweden.....	6	15 7 15			
Petersburg & Riga white deals.....	8	10 10 0			
Memel and Dantzic, Crown red deals.....	0	0 0 0			
Brack.....	0	0 0 0			

ENGLISH WOOL MARKET.

LONDON, MONDAY, April 22.—The tone of the Wool market is still healthy, but business is not extensive; fine qualities command the larger share of attention, but for inferior sorts there is not much demand. Business is suspended in some measure pending the arrival of the new clip.

CURRENT PRICES OF ENGLISH WOOL.			
FLEECES—Southdown hogs.....	per lb.	s. d.	s. d.
Half-bred ditto.....	"	1 1½	2 0½
Kent fleeces.....	"	2 1	2 2
Southdown ewes and wethers... ..	"	1 10	1 11
Leicester ditto.....	"	1 10	1 10½
SORTS—Clothing, picklock.....			
Prime.....	"	1 7	1 10
Choice.....	"	1 4	1 5
Super.....	"	1 3	1 3½
Combing, wether mat.....	"	1 2	1 2½
Picklock.....	"	2 1	2 2
Common.....	"	1 9	1 10
Hog matching.....	"	1 6	1 7½
Picklock matching.....	"	2 2	2 3
Super ditto.....	"	1 9	1 10
Super ditto.....	"	1 6	1 7½

MANURES.

Peruvian Guano, direct from importers' stores, £13 0s. per ton.	Bones, crushed 4½, half-inch 28 5s., bone dust 15 6s. per ton.
Co. rotte, Cambridge (in London) whole £3 5s., ground £3 15s., Suffolk whole £2 10s., ground £3 per ton.	Nitrate of Soda, 47 per ton.
Sulphate of Ammonia, 22 10s. to 24 per ton.	Gypsum, 41 10s. per ton
Superphosphate of Lime, 45 5s. to 45 5s. per ton.	Blood Manure, 45 10s. to 48 per ton. Dissolved Bones, 27 per ton.
E. PURSER, London Manure Company, 116, Fenchurch Street, E.C.	
Guano, Peruvian £12 17 6 to £0 0 0	Bone Ash..... £0 0 0 to £0 0 0
Linsd. Bomby. p. q. 3 5 0	3 6 0 Phosphate of Lime 0 0 0
Linsced Cake, per ton.....	Niger..... 0 0 0
Amer. thin, bgs 10 5 0	10 10 0 Nitr. of Soda, p. ct. 0 15 6
Cottd. Cake, decoc. 7 0 0	7 5 0 German Kainit..... 0 0 0
Expessed Guzerat 3 10 0	3 12 0 Follow, 1st F.Y.C. 0 0 0
Cloverseed, N.A. 2 3 0	2 8 0 „ super, Norths 2 1 0

SAMUEL DOWNES and CO., General Brokers,
No. 7, The Albany, Liverpool.

Prentice's Cereal Manure for Corn Crops.....	per ton	48 0 0
Mansfield Manure.....	"	8 0 0
Prentice's Turpin Manure.....	"	6 30 0
Prentice's Superphosphate of Lime.....	"	0 0 0

Agricultural Chemical Works, Stowmarket, Suffolk.

Printed by Rogerson and Tuford, 265, Strand, London, W.C.

THE FARMER'S MAGAZINE.

M A Y, 1 8 7 2.

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THE
MARK LANE EXPRESS
AND
AGRICULTURAL JOURNAL

IS THE

LARGEST AND THE LEADING FARMER'S AND GRAZIER'S NEWSPAPER.

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Newsmen throughout the Kingdom, price Sevenpence, or £1 10s. 4d. per annum.

IMPORTANT TO FLOCKMASTERS.

THOMAS BIGG, Agricultural and Veterinary Chemist, by Appointment to his late Royal Highness The Prince Consort, K.G., Leicester House, Great Dover Street, Borough, London, begs to call the attention of Farmers and Graziers to his valuable SHEEP and LAMB DIPPING COMPOSITION, which requires no Boiling, and may be used with Warm or Cold Water, for effectually destroying the Tick, Lice, and all other insects injurious to the Flock, preventing the alarming attacks of Fly and Shab, and cleansing and purifying the Skin, thereby greatly improving the Wool, both in quantity and quality, and highly contributing to the general health of the animal.

He would also especially call attention to his SPECIFIC, or LOTION, for the SCAB or SHAB, which will be found a certain remedy for eradicating that loathsome and ruinous ailment in Sheep, and which may be safely used in all climates, and at all seasons of the year, and to all descriptions of sheep, even ewes in lamb. Price FIVE SHILLINGS per gallon—sufficient on an average for thirty Sheep (according to the virulence of the disease); also in wine quart bottles, 1s. 3d. each.

Prepared only by Thomas Bigg, Chemist, &c., at his Manufactory as above, and sold as follows, although any other quantity may be had, if required:—

4 lb. for 20 sheep, price, jar included.....	£0 2 0
6 lb. 30 " " " " " " " " " " " "	0 3 0
8 lb. 40 " " " " " " " " " " " "	0 4 0
10 lb. 50 " " " " " " " " " " " "	0 5 0
20 lb. 100 " " " " " " " " " " " "	0 10 0
30 lb. 150 " " " " " " " " " " " "	0 15 0
40 lb. 200 " " " " " " " " " " " "	1 0 0
50 lb. 250 " " " " " " " " " " " "	1 3 6
60 lb. 300 " " " " " " " " " " " "	1 7 6
80 lb. 400 " " " " " " " " " " " "	1 17 6
100 lb. 500 " " " " " " " " " " " "	2 5 0

IMPORTANT TESTIMONIAL.

"Scoulton, near Ilingham, Norfolk, April 16th, 1855.
 "Dear Sir,—In answer to yours of the 4th inst., which would have been replied to before this had I been at home, I have much pleasure in bearing testimony to the efficacy of your invaluable 'Specific for the cure of Scab in Sheep.' The 600 sheep were all dressed in August last with 84 gallons of the 'Non-poisonous Specific,' that was so highly recommended at the Lincoln Show, and by their own dresser, the best attention being paid to the flock by my shepherd after dressing according to instructions left; but notwithstanding the Scab continued getting worse. Being determined to have the Scab cured if possible, I wrote to you for a supply of your Specific, which I received the following day; and although the weather was most severe in February (during the dressing, your SPECIFIC proved itself an invaluable remedy, for in three weeks the Sheep were quite cured; and I am happy to say the young lambs are doing remarkably well at present. In conclusion, I believe it to be the safest and best remedy now in use.

Should any Flockmaster prefer boiling the Composition, it will be equally effective.

MOST IMPORTANT CERTIFICATE.

From Mr. HEREPATH, the celebrated Analytical Chemist:—Bristol Laboratory, Old Park, January 15th, 1861.

Sir,—I have submitted your Sheep Dipping Composition to analysis, and find that the ingredients are well blended, and the mixture neutral. If it is used according to the directions given, I feel satisfied, that while it effectually destroys vermin, it will not injure the hair roots (or "yolk") in the skin, the fleece, or the carcase. I think it deserves the numerous testimonials published. I am, Sir, yours respectfully,

"I remain, dear Sir,
 "For JOHN TINGEY, Esq.,
 "R. RENNEY.

"To Mr. Thomas Bigg."
 Flockmasters would be well to beware of such preparations as "Non-poisonous Compositions;" it is only necessary to appeal to their good common sense and judgment to be thoroughly convinced that no "Non-poisonous" article can poison or destroy insect vermin, particularly such as the Tick, Lice, and Scab Parasites—creatures so tenacious of life. Such advertised preparations must be wholly useless, or they are not what they are represented to be.

DIPPING APPARATUS.....£14, £5, £4, & £3.

THE ROYAL FARMERS' INSURANCE COMPANY,

3, NORFOLK STREET, STRAND, LONDON, W.C.

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1st Class—Not Hazardous	1s. 6d. per Cent.
2nd Class—Hazardous	2s. 6d. "
3rd Class—Doubly Hazardous	4s. 6d. "

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Policies to protect parties from Loss by the destruction of Growing Crops or Glass, by Hail, are granted on Moderate Terms.

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No. 6, Vol. XLI.]

JUNE, 1872.

[THIRD SERIES.

THE
FARMER'S MAGAZINE,

AND

MONTHLY JOURNAL

OF

THE AGRICULTURAL INTEREST.

Dedicated

TO THE

FARMERS OF THE UNITED KINGDOM.

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JUNE, 1872.

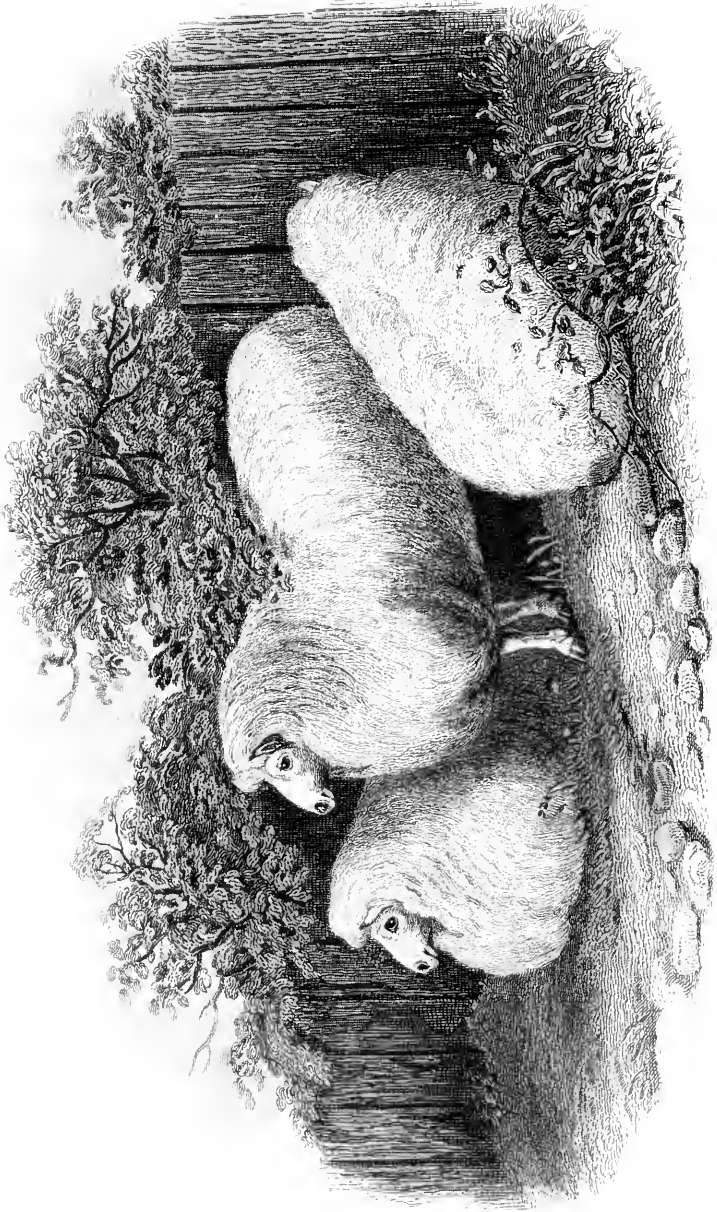
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Sheep in the Field



THE FARMER'S MAGAZINE.

JUNE, 1872.

PLATE I.

LINCOLN WETHERS.

THE PROPERTY OF MR. JOHN BYRON, OF KIRKBY GREEN, SLEAFORD.

This famous pen of Lincolns took the following prizes in 1871 :

At the Brigg Meeting of the Lincolnshire Agricultural Society—First prize, £10 ;

At the Oakham Meeting of the Rutland Agricultural Society—First prize, £10 ;

At the Birmingham Meeting of the Midland Counties' Society—First prize of £15, with Silver Medal and Linen and Woollen Drapers' prize of £10 ;

At the Islington Meeting of the Smithfield Club—First prize of £20, Silver Cup of £20 as best Leicesters, Cotswolds, Lineolus, Kentish, or other Longwools, and Champion Plate of £50 as best pen of sheep in the show ;
At Sleaford Fat Stock Show—First prize ;

At Leeds Fat Cattle Show—First prize and Silver Cup as best pen of sheep in the show.

The registered weight of these sheep when exhibited in London was 8 cwt. 1 qr. 4lb., and their age 21 months.

On first seeing these sheep at Oakham we recorded them as very superior ; and again at Birmingham spoke to their high quality ; while in London their fine fleeces for once carried the day. At Leeds, too, our re-

porter declared that these Lincolns "alone fully sustained the honour of the Longwools against all comers. We think we never saw better Longwools."

Mr. Byron thus writes of his flock: "It is, as near as I can ascertain, a little more than a hundred years since my grandfather began farming at Tathwell, near Louth, under the grandfather of my present landlord, Henry Chaplin, Esq., M.P. of Blankney Hall, Lincoln. He bred for a number of years—I believe for forty—from the old Tathwell flock, so well known in Lincolnshire, and continued to do so up to the time of his giving up business, when the flock came into the hands of my father, who kept breeding on in the same way, using occasionally a few sheep from the late Mr. John Kirkham, of Hagnaby, and in later years of his son, Mr. Thomas Kirkham, of Biscathorpe, near Louth. Thirteen years from last spring I came to Kirkby Green, and brought a flock of ewes with me, selected nearly entirely from my father's and brother's flocks, and I have crossed these with rams hired from Mr. C. Clark, of Scopwick ; as I have also used a few sheep from the old Tathwell and Biscathorpe flocks."

PLATE II.

THE LANDING PLACE.

"Allowing to the recreation of fox-hunting and deer-stalking all they lay claim to, as manly and exciting pastimes, I cannot help preferring to either of them, indeed to any of our national amusements whatsoever, the noble sport of salmon fishing. The others, it is true, have their moments and their intervals of extreme, it may be thrilling pleasure ; even their blanks and disasters scarcely, on some occasions, deserve the name of disappointments or calamities. But there is wanting that indescribable something which gives its zest to the sport I am treating of, rendering its pursuit throughout more equably delightful, and yet offering no hindrance to higher and intenser occasions of enjoyment—created, for in-

OLD SERIES.]

stance, by the play and capture of some vigorous and magnificent fish." So says Mr. Stoddart ; and of the salmon, "Among objects closely associated with the sublime and beautiful, I cannot help classing this noble fish. The elegance of its form, the justness of its proportions, its glittering and gorgeous apparel—all entitle it to rank loftily in the scale of beauty ; while its size and noble bearing, its strength and velocity, the rocks' torrents, and whirlpools among which it glides familiar, unite in some degree to elevate its pretensions, and give it a place withal amid creations of sublimity. That it stands unrivalled among the variety of fishes, extending to many hundreds in number, which inhabit the flood, there can be little

question. The dolphin, famed in poetry, whose glowing surface may be termed the pallet of nature; the mullet, the opah or king-fish, the carp, the dorie, and sturgeon—all yield before it the submissive palm. Nor is it undistinguished, independent of its shape and beauty, by certain instincts and properties, which elevate it still higher above the rest of the finny tribe." After rising and hooking, and managing the fish when hooked, Mr. Stoddart thus instructs his readers on another important part of the performance in first catching the fish—"The Landing: On Tweedside, a gaff-hook or click is generally made use of by salmon fishers, in order to expedite the landing of the fish. I have remarked in some parts of Scotland a small hoop-net is also employed for this purpose. In respect that it is not liable to abuse or injure the appearance of the salmon, the latter implement may be considered the preferable one. The click, however, is more convenient, and may be resorted to in places and distances where the hoop-net cannot be made available. The employment of a landing appliance at all—certainly not its advantage—may be considered, in a sporting view, as questionable. I have heard it insisted on that an angler ought always to play his fish to bank, and secure him entirely by his own management, and with his own hand. To this I do not entirely assent; but I certainly think there are occasions when the gaff-hook is brought into play quite inopportune, when, in fact, it acts, along with its wielder, a part in the capture of the fish that can scarcely be esteemed secondary to that engaged in by the rodsman himself. In expert hands, this implement is unquestionably of great advantage in securing partially-exhausted fish. At the same time, it curtails what many may consider a portion of the sport; and I have seen it put in requisition at a stage altogether premature: the fish, on being hooked, and before its strength was nearly worn out, having waywardly edged in, so as to give the opportunity referred to. I am well aware that there are some salmon-fishers who hold the playing and the landing of the fish as very inferior considerations, and who reckon the whole art and amusement to consist in the raising and hooking. With one gentleman I am acquainted, an able and eager sportsman, who,

after the first burst, was accustomed to resign the rod into the hands of the attendant, in order to rid himself of what he considered a slavish or supplementary task. To such individuals the employment of the gaff-hook is a matter of perfect indifference; but I cannot reconcile myself to their cramped and petted notion on the subject of what forms a most essential constituent of the amusement. The "playing and landing of the fish are unquestionably act and part with the raising and hooking, and, when separated, all interest on the part of either performer is diminished; the capture of the fish becomes a disputed matter, achieved betwixt the parties, and claimed accordingly. In the absence of an assistant, the salmon fisher should always be careful to select the best landing-place within view—one to which he can readily land his fish when exhausted, and where he has no occasion to exert further strength than he has all along been using, in order to draw it ashore. Gravel banks partly covered with shoal water, flat rocks similarly circumstanced, or any level spot where the salmon may naturally turn over at once, without power of recovery, on his broad side, are well adapted for the purpose in question. In case of no such convenient landing-place being at hand, I would, rather than risk the loss of a good fish, guide him to some distance down the river, until, in fact, I fall in with a desirable port. Do not, however, be induced to haul a salmon up against the stream, with the view of landing it on some jut of sward, sand, or rock that engages your fancy at the moment. Should the fish press or incline to be guided towards it, good and well; but on no occasion resort to force when force may be avoided. The fish being grounded, shorten line to the extreme, and, holding back your rod with one hand, step forward, and with the other grasp the salmon tightly above the tail. A glove or cotton mitten will be found of great service at this juncture. You may then toss or carry it to the bank above, and by a blow or two on the head immediately despatch it. In case of your line being too long to permit you to seize the fish without quitting hold of the rod, then do so; only act with rapidity when you approach to make your seizure."

THE FARMERS' CLUB.

THE PRINCIPLES AFFECTING CULTIVATION, MANURING, AND CROPPING.

The monthly meeting was held on Monday, May 6, at the Salisbury Hotel, Fleet-street, Mr. H. Cheffins, of Easton Manor, Dumnow, in the Chair.

The CHAIRMAN said that the subject for discussion was "The Principles Affecting Cultivation, Manuring, and Cropping," by Mr. J. J. Mechi; and he was sure that it would best suit the wishes of the meeting if he at once introduced Mr. Mechi, who would put the subject before the meeting in his usually nice way.

Mr. MECHE read the following paper:

We meet here this evening to consider how we may somewhat increase the farmers' profit and the food of the people. Is there not a necessity for so doing? Our nation is in a very

peculiar and exceptional position. In 1801 we were 15,000,000, and home-fed. Now, notwithstanding the Irish famine and consequent depopulation and emigration, we number 32,000,000, and are annually increasing. During the last century we were exporters of corn, and so late as 1837 we were able to produce nearly enough of home-grown food (with a few years of exception)—even up to 1846 our import of foreign corn had never reached 3,000,000 of quarters in a single year. Now, some 10,000,000 of our population are dependent on foreign nations for their daily bread. It is painful to reflect upon the disaster and disorder that would probably attend the interruption of our foreign supplies of food, for in that case every third person might be starved, and the country involved

in anarchy and confusion. I can remember the time during the First Napoleonic war when much distress and discontent arose from the scarcity and high prices of provisions. The stoppage of imports by war would diminish *pro rata* the foreign demand for our manufactures, and throw out of employment vast numbers of our manufacturing classes, as was the case in the Cotton Famine. We have become really now a manufacturing, trading, and commercial community, rather than an agricultural people, for only a moderate percentage of our population are employed in agriculture. According to the last Board of Trade returns, we have in the United Kingdom 76,405,963 statute acres, exclusive of lakes and rivers. Of these there are

	Acres.
Woods and forests.....	2,499,756
In permanent pasture (much very poor)	22,525,761
In grass, under rotation	6,233,588
In corn crops	11,833,243
Bare fallow	565,886
Green, root, and other crops.....	5,071,174
	48,729,408
Not farmed.....	27,676,560
Total	76,405,968

The Enclosure Commissioners have just issued their 27th annual report on common and commonable land in England and Wales, and state that out of 9,000,000 acres only 670,000 acres in the last 25 years have been enclosed. They take no note of waste lands in Scotland and Ireland. Our annual agricultural produce, available as human food and drink, is, according to my estimate, less than £150,000,000. Mr. Lavergne estimates our total produce at only £3 7s. per acre (£150,000,000), and the farmers' capital at £4 per acre. Our annual consumption of foreign eatables and drinkables amounts to much more than £80,000,000.

Total imports, 1872..... £326,834,647

FOREIGN.

Corn and bread stuffs.....	£42,000,000
Oxen, sheep, &c.....	5,660,000
Bacon	2,500,000
Pork	700,000
Cheese	3,343,000
Butter	7,000,000
Eggs	1,250,000
Lard	1,300,000

£63,753,000

Tea, sugar, coffee, cocoa, rice, and tapioca,
more than

25,000,000

Total

£88,753,000

We have, therefore, evidently a vast margin for increased home production by agricultural improvement, including the utilisation of sewage. If the voidances from this £89,000,000 worth of foreign consumables passed into our soil instead of into sewers and rivers, how much of our land it would fertilise, and how much more food would be produced! Our country would indeed then become annually more fertile instead of more sterile. Surely it is the duty of our Legislature and Government to initiate and encourage all measures that tend to the increased investment of capital and intelligence in agriculture. Those most required are greater facilities for the purchase or exchange of land, security of tenure by leases, valuation for tenants' unexhausted improvements, and power to life-owners of estates to invest capital in necessary landowners' improvements. Acts of Parliament would do much to emancipate agriculture from old-fashioned and

feudal customs, suitable only to a past and pastoral age, and give to it a more business-like and commercial character adapted to modern circumstances and requirements. The home-grown food question is becoming rapidly more and more urgent. In addition to legislative changes, we must look more to science to guide and instruct us in agriculture. I have come to this conclusion after a careful study for many years of Baron Liebig's four great works—"Chemistry in its Applications to Agriculture and Physiology," "Letters on Modern Agriculture," "Fifty Principles in Agriculture," and his last grand work, published in 1862, "The Natural Laws of Husbandry." We know practically how much benefit agriculture has already derived from a valuable member of our Club, Professor Voelcker. Our Royal Agricultural Society has for thirty years placed on the title-page of its annual volumes, "Practice with Science." Have we farmers all obeyed this command? Not yet, I fear; for there are still too many practical farmers who deprecate book-farming; but although formerly they were a legion, their ranks are becoming annually somewhat thinned by the progress of enlightenment and by a more liberal education of the rising generation, especially that conferred by the Royal Agricultural College at Cirencester. I venture to predict that within another century (which is not long in the history of a nation) our agriculturists will be found studying in their library the scientific principles of agriculture enunciated by Liebig, Way, Voelcker, Playfair, and our other agricultural philosophers. Town sewage will not then be permitted to flow into our rivers, instead of on the land. For want of scientific guidance, thousands of farmers have been, and are still groping in the dark for the most profitable path, and have only now and then found it, after innumerable experiment, too many of which have been costly and unsuccessful. Our greatest agricultural philosopher (Baron Liebig) says (p. 233, *Modern Agriculture*): "Agriculture is of all industrial pursuits the richest in facts, and the purest in their comprehension. A fact simply tells us of its existence, but experience ought to inform us why it exists. Science does not reject the truths discovered by practice, but receives them; they are never despised by her—but are examined and receive from her their proper import and further application. The business of science is to seek for causes, and, like a light, to illuminate the surrounding darkness. Agriculture is both an art and a science. Its scientific basis embraces a knowledge of all the conditions of vegetable life, of the origin of the elements of plants, and of the sources from whence they derive their nourishment. From this knowledge fixed rules are formed for the practice of the art—that is, for the necessity or advantage of all the mechanical operations of the farm, by which the land is prepared for the growth of plants, and by which those causes are removed which might exercise an injurious influence upon them. Experience acquired in the practice of this art can never stand in contradiction to its scientific principles, because the latter have been deduced from all the observations of experience, and are actually an intellectual expression of it. Neither can theory ever stand in antagonism to practice, for it is merely the tracing back of a class of phenomena to their ultimate causes." My object in addressing you this evening is to endeavour to impress upon agriculture the advantage and necessity of trusting more to scientific principles as a guide to practice in the art of tillage, manuring, and the rotation of crops. Time will only permit me to draw an outline, which must be filled up by a personal study and reflection.

CULTIVATION.—If I ask for a definition of the word cultivation, I am told that it means the disturbance or upturning of the earth to a depth of 5 inches, or the thickness of a family Bible, which is the admitted substance of the British agricultural pie-crust, but when I ask why this particular depth of 5 inches (in preference to 10, 15, or 20) has been fixed upon, I can get no satisfactory or scientific reply. I presume it must be because a pair of horses (sometimes four, I fear) can plough at that depth an acre per day. We cannot call this either a scientific or satisfactory explanation. If the roots of plants descended only 5 inches, and found within that space ample nourishment for their perfect development, there would be no occasion to find fault; but we know that it is not so, and that plants send their roots down into the subsoil several feet, especially if it is in a suitable condition, which is very rarely the case, because it has neither been disturbed, aerated, drained, or manured. When I hear, as I frequently do, that high farming injures the barley crop, I smile and reply, "Mix the rich topsoil with the poor unmanured subsoil, and you will then no longer complain of laid frothy crops, which injure young clover; but don't sow too thickly." Here is a striking instance of the advantage derived from more deeply disturbing the soil and subsoil. In the presence of 700 of my guests, in July, 1856, Fowler's steam-plough, with Cotgreave's subsoiler attached, operated on three stetches of one of my clover-leas. The result was that, although all the field had been under good and deep cultivation, these stetches appeared, in the early growth of the wheat crop, as though they had received an extra dressing of manure; and for five years after all the crops on those deeper-disturbed stetches showed a manifest advantage. It surprises me that this system of double or under ploughing (one furrow-slice covering the other) is not more generally adopted with Fowler's plough, as was done on my field in 1856. The late worthy Mr. Fowler was, I think, present on the occasion. It is hard work for the engine to do this unless full-powered. Perhaps that is why it is not done, but it should be. The subsoil is thus so well aired, and the crops improved. Liebig says (p. 178, *Natural Laws of Husbandry*): "Thus the subsoil, considered as a field apart from the arable soil, gives to turnips and lucerne a certain quantity of mineral constituents. Where the fields have a subsoil favourable to the growth of these plants, it is as though the arable-surface soil were doubled." We hear great complaints about thin-skinned land. Whose fault is it? Mine was wretchedly thin-skinned 30 years ago, until I greatly deepened the staple by breaking up the subsoil under the ploughed land, still keeping the old soil uppermost. By these means the passive elements of the plant-food in the subsoil became gradually active and available. Draining of course preceded the subsoil disturbance. All this has been and must be profitable. However much a farmer may be restricted in his lease, there is never any limit as to the quantity of soil he may use for the growth of his crops. It may be 500 tons per acre at a depth of 5 inches, or 5,000 per acre at a depth of 50 inches. His rent, rates, tithes, taxes, &c., will be no greater on one than on the other, but his crops will be unmistakably increased. Drainage must be used if the land is not naturally drained. There are, of course, loose friable soils that require compression rather than deep disturbance. Liebig attaches the utmost importance to deep and efficient tillage as an agricultural basis. He says at p. 121, *Modern Agriculture*: "The agriculturist has to do with the soil alone; it is only through it that he is able to exercise an immediate influence on

plants. The attainment of all his objects in the most complete and profitable manner, pre-supposes the exact knowledge of the effective chemical conditions for the life of plants in the soil; it further pre-supposes perfect acquaintance with the food of plants, and the source from which it is derived, as well as with the means for rendering the soil suitable for their nutrition, combined with experience and skill in employing them in the proper way, and at the right time." Science has indicated that in the subsoil we should seek for increased profits, for it teaches us that in the great majority of soils the earth at every depth contains a certain portion of the elements of plant food, which only require aëration and amelioration by disturbance, drainage, and manure, or by burning, to render them gradually available as plant food. Science has also discovered that it is not possible to manure the subsoil through the topsoil, except in a very slight degree, for the latter has the power of fixing and retaining very much larger quantities of plant food (ammonia, phosphate of lime, and potash) than are usually applied; only very small portions of these pass annually into the subsoil—we should, therefore, intermix the top and bottom soil. Farmers, as a rule, have no faith in the subsoil, but, on the contrary, rather fear it, believing that there is something unwholesome under the cultivated crust, and that the interior of the pie is of the wrong sort. The fact is, that it is raw and uncooked, because it has never, like the top soil, been stirred and exposed to the ameliorating and fertilising influences of the atmosphere, and in too many instances, for the want of drainage, air is completely excluded by the presence of stagnant water. The good effects of cultivating the surface soil should have taught us how beneficial would be a disturbance of the subsoil. Here let me draw a distinction between ploughing and cultivating: great injury may arise from suddenly upturning the raw subsoil and burying the friable top soil, while much good will result from breaking and loosening the subsoil, thus permitting some of the top soil and manure to fall into, and gradually intermix with it. Some subsoils may be safely brought to the surface, but this is not generally the case; a trial of the subsoil in some flower-pots will soon enable you to judge. Certain folks are, however (thanks to steam-power), now disturbing the contents of the pie most resolutely and fearlessly, both in hop gardens and elsewhere. At Farringdon, in Berkshire, two sets of Fowler's 30-horse power engines are cultivating, or breaking (not ploughing) the land to the depth of 36 inches. Messrs. Fowler of Leeds, wrote to me, in reply to my question: "There is no doubt that the larger the engine is, the more economical it is in point of fuel; but the great difficulty we have to contend with in these large engines is the unprepared state of the land for steam cultivation. If there were larger enclosures, and proper roads were made, we should certainly then say the larger the engine the better; but in the present state of things it is better, except in some special cases, to have engines of a moderate size. Mr. Campbell's engines work very well, and are doing four or five acres a day, three feet deep." Mr. Campbell, jun., told me the other day that the large 30-horse power engines could take their proper position on the land when the smaller ones were unable to do so. Of course, in manual labour they must be the cheapest, seeing that one engine-driver could manage a 50-horse power engine, whereas five would be required for five of 10-horse power. How very lucky it is that all Mr. C.'s land has been drained with pipes at a depth of four feet, although I doubt if that will be deep enough when we get the 50-horse

power engines. But how readily the water will now pass down to these drains through the stiff soil, after 36 inches of loosening or cultivation ! and what additional facilities will thus be afforded for passage of air and manure to the subsoil ! Furrows and water-furrows will be unnecessary. The dense undisturbed clay subsoil, trodden for ages by horses, and compressed by the weight of the surface soil, is in a most unfit condition for the passage of root fibres, and we know how difficult it is for even the steam cultivator to break up for the first time this homogeneous mass. The good effect of loosening the subsoil is visible for a great many years. Some 29 years ago I drained all my land, and over every drain for more than 20 years there was a visible advantage to the plants immediately over the disturbed space. This arose from free circulation of air and water, and from the diminished obstruction to the passage of root fibres. The same profitable result will take place over the whole surface of our land when it is disturbed by steam cultivation to the depth of 2 to 3 feet. But also the land will be drier and warmer, and we well know how important is warmth to the soil, and especially to the subsoil, for it is by bottom heat that gardeners succeed in growing their magnificent specimens of luscious grapes and other fruits. They know that mere surface or outside heat cannot produce such results: the earth to some depth becomes gradually warmer as the days lengthen, and loses that heat gradually in autumn and winter. The heated soil promotes the early multiplication of root fibres. The earth has an especial attraction for the sun's heating rays, so much so that its surface temperature in sunshine is many degrees warmer than the air above it—sometimes as much as 30 degs. to 40 degs. When walking over fallow on a bright spring day, although the air was nearly frosty, I have felt the heat through the thin soles of my shoes. I have observed over fallowed ground, during sunshine, a trembling waving of the air; this is produced by the lower stratum of air in immediate contact with the earth becoming heated and expansively lightened, when it immediately struggles to rise through the cooler and heavier atmosphere. I have noticed the same waving, struggling, upward movement in the air over and around heated stoves, or pipes. We have all observed how rapid is the growth of plants after a heavy thunder shower, falling on the heated soil. This is because water is the great carrier of heat downwards; falling on the superheated top soil, it robs it of some of its heat (just as cold water from a shower-bath robs our warm bodies of their heat), and in passing down to the drains is itself deprived of heat by the colder subsoil, for at 4 deep feet the subsoil is generally as low as about 46 degs. or 48 degs., while the surface may be at 100 degs. to 130 degs. And now becomes obvious the advantage of deep cultivation and drainage, which permit the heated water to circulate freely in the soil and subsoil, and, in excess, to pass away through the deep drains, deprived of its neat and valuable food constituents. When our stiff clays crack abundantly, and often to the depth of 4 feet, the wheat crop is sure to prosper, the warm air having access to the cold subsoil by the cracks. I have several copious deep spring drains, running summer and winter, the temperature of the water being always about 46 degs. to 48 degs. (which I believe is the temperature of the soil at 4 feet), so that the parts of the pond into which it enters never freeze, while in the summer it feels almost as cold as ice. It is most important, therefore, that spring or bottom-water drains should be placed very deeply, to prevent the cold water from rising by capillarity or pressure to the surface, and by its chilling influence retard the

growth of plants, for none can prosper, excepting bog moss, where spring water rises to the surface. Subsoils well broken into and rendered friable are accessible to atmospheric embraces which are always fructifying. When these dense compact subsoils thus become more friable and capillary, we might then almost compare them with a piece of loaf-sugar, while, previous to this disturbance, they were like a lump of lead or putty—the one with, and the other without, those capillary powers which are so valuable. The importance of this capillary power is detailed and illustrated by Baron Liebig, Letter 3, p. 46, *Modern Agriculture*: "Remarkable Power of Absorbing Moisture Possessed by Soils.—By absorption and evaporation of moisture the soil is warmed or cooled; great importance of this fact to vegetation." We may, however, safely accept as a principle that it is profitable to make use of the subsoil, now that mighty and untiring steam can cheaply and effectually enable us to do so. At the Wolverhampton trials of steam-ploughs and cultivators it was found that for every pound of coal used, 9 tons of earth were moved; so that 10 inches deep of soil, or 1,008 tons of earth, could be moved by 112 lbs. of coal, worth, in the South of England, 1s., although at Wolverhampton and the coal districts it would barely cost 6d. In the Cornish pumping engines, which are used in our town water-works and in the Cornish mines, the best engines will, with 112 lbs. of coal, lift 50,000 tons of water 1 foot high. Here we have an extraordinary evidence of the enormous gain of force or power and national wealth, owing to the scientific invention and perfecting of the steam-engine. It is rather remarkable that while 1 lb. of coal can raise 1 million pounds (or 446 tons) of water a foot high, the 1 lb. of coal at Wolverhampton only moved 20,160 lbs., or 9 tons of earth. What a margin for friction, resistance or variety of engine! The valuable, costly, and instructive trials at Wolverhampton of steam-machinery for cultivation and traction, and the able report and conclusions formed upon those trials recorded in the Royal Agricultural Society's *Journal* (new series, vol. vii., p. 472), entitle that Society to our best thanks; but, useful and profitable as these reports (and the former report on steam-cultivation) must be to the practical farmer, I doubt whether they will be read by many farmers out of the 400,000 in England, Scotland, and Wales, for only some 2,000 or 3,000 are members of that important society, which gives a large volume of first-class information to each of its guinea subscribers annually. In fact, if we must tell the truth, ancient farmers have not been a reading race, but the schoolmaster is abroad now. Our farmers' clubs, chambers of agriculture, and the agricultural press, afford ample opportunity for agricultural oratory and literature. Stiff soils are not so easily exhausted as loose light soils, because although the plant can multiply and push its fibres readily through the loose soil, and suck at many granules, dense tenacious soils oppose a much greater resistance to the passage of root fibres; that is why the necessity exists for loosening them as much as possible by steam-power, and why strong powerful rooted plants, like beans, mangel, and clover, thrive best on such soils. The beans and clover make a way for the wheat fibres, and render the plant food in the soil more available by shading the soil. I have reason to believe that if after cultivating the soil to the depth of 2 or 3 feet, it were amply saturated with town sewage, profitable results would ensue. We should not forget that town sewage has a very much greater specific gravity than water, and that its temperature, which is sufficiently high to dissolve the frost and

penetrate the ground in frosty weather, must warm the sub-soil. The specific gravity of the liquid manure in my tank is often so great after saturating the solid manure, that the whole of the latter will rise to the surface like a cork, or like a penny piece in quicksilver. It does not answer to let the stiff clays crack before you apply sewage. I will give you an instance of this: One of my fields of very stiff yellow clay or tile earth (given to crack in drying, and therefore unfit for making bricks) was in Italian rye-grass, and although drained with 1-inch pipes 5 feet deep, and 50 feet from drain to drain, the ground cracked deeply. While my man was, during the summer, irrigating with hose and jet I was surprised to find the running spring water in the ditch coloured, and smelling of manure. I then examined the mouths of the drainpipes, and found, to my astonishment, that they were discharging a full stream of liquid manure, almost as strong as when applied on the surface. Having since then inspected several farms which are flooded with town sewage, and seeing that in every one of them the water comes from the drains (6 feet deep), as clear as spring water, I see clearly that it will not do to let clays become dry enough to crack if the sewage or manure is to be made the most of, because, even if solid manure were spread upon such lands when full of cracks, the first heavy thunder-storm would wash some of its best solutions down the cracks and through drains. I have been very much interested and enlightened as to the mode in which plants feed, how their food is distributed and fixed in the soil, and how little of it they can use in a single season. All this is new to us, and is explained by Baron Liebig in his last great work, *The Natural Laws of Husbandry*, which treats of the plant, the soil, and the manure. How little we suspected that the manures, when placed in the soil (that is, the three important ingredients of plant food, phosphate of lime, potash, and ammonia) are immediately and immovably fixed on the granules of soil and cannot be washed from them, and that every particle that is coated with this manure, if not touched or sucked by a root fibre, is of no use to the plant; so that in fact, as a general rule, 99 parts out of 100 are unavaild of by the plant in a single year, because it has only roots enough to touch one granule of soil out of 100 or more. This is why a heavy dressing of rich shed-manure shows its effects for so many years, especially on heavy land, where the fibres have more difficulty in spreading than on light or friable soil, which is much more easily intermixed, and also much more accessible to the fibres of plants, so that manure in such soil is more quickly appropriated. I cannot attempt in this paper to give even an outline of this important subject, but recommend you to study it for yourselves; it will be to your profit. Liebig, for this and other reasons, attaches the utmost importance, not only to deep and frequent tillage, but also to the rotation of crops, each of which may feed at different places and depths, and also on different sorts and proportions of plant food, their roots varying in size and power. Liebig says, at p. 125, *The Natural Laws of Husbandry*: "Hence the art of the agriculturist mainly consists in selecting such plants as will thrive best on his land, in adopting a proper system of rotation, and in using all the means at his command to make the nutritive elements in chemical (unavailable) combination available for plants. The achievements of practical agriculture in these respects are wonderful, and they demonstrate that the triumphs of art far exceed those of science, and that the farmer, by aiding the agencies which improve the chemical and physical condition of his land, can

obtain much more abundant crops than by supplying nutritive matters." Unfortunately (owing to the want of knowledge as to causes) these successful results have only been obtained at the expense of millions of experiments, many of them costly and unsuccessful. Witness Mr. Hemming's unsuccessful attempts to grow beans, after turnips drawn off, as mentioned in another part of this paper. In February, 1866, I had the honour to read to you a paper on British tillage, present and future. To that I beg to refer you for a more detailed report of my views about tillage. My commendation of deep cultivation applies, of course, to dense or hard-bottomed soils.

MANURE AND MANURING.—The great lesson taught us for the first time by Baron Liebig is this—That there are certain indispensable elements of plant food contained naturally in most soils, viz., potash, phosphate of lime, magnesia, &c., that cannot be sent to the air by burning, nor yet from the air, and, therefore, if we send them away in the produce which we sell, and omit to bring them back again, that purse will soon be empty. He also tells us that a great portion of these elements, although in the soil, are raw and uncooked, and therefore the plants cannot eat them, until they are prepared, or cooked, by cultivation, by aëration, or by the action of certain chemical substances. He also tells us why farmyard manure, when made by cake and corn-fed animals, is not only good to produce all crops, but acts favourably by preparing and rendering available the uncooked plant-food not only in the soil but also in the subsoil, if we could be induced to mix the latter with the manure—which very few will do—because they don't know that they cannot manure the subsoil through the topsoil, for the latter holds it fast, and will not part with it except to plant-roots. We have plenty of evidence of this fact in the railway cuttings, where we see that the poor subsoil, under the few inches of top soil, has not even been coloured by manure. We occasionally hear of the danger of over-manuring; but this I can say for a certainty, that we can never over-manure the subsoil to the depth of 1 to 3 feet. Thus, we should not only double or triple our mangel and root crops (for 70 to 100 tons may be grown per acre), but the withdrawal of such heavy crops would still leave the land capable of producing abundant corn crops; but as we cannot manure the bottom soil through the top soil, the latter must be thrown or ploughed back, and the manure be incorporated directly with the subsoil. Steam-power will very readily give us access to the subsoil by deep furrows. Strong deep-rooted crops, fruit-trees, &c., feed in the subsoil. If that is well filled either with solid or liquid manure (but not through the top soil) such plants flourish amazingly. For my shrubs or camelias I bore holes a yard deep, and pour down them guano and water or liquid manure, and they prosper accordingly. We are beginning practically to awaken to the great truth so forcibly expressed by Liebig 32 years ago. He then warned us of the danger of exhausting the plant food in the soil by the exclusive frequent use of nitrogenous or ammoniacal manures. Repeated application even of the best Peruvian guano, which is deficient in potash, has on calcareous, sandy and loose soils, gradually produced exhaustion; and so it has on pastures, where large crops of hay were at first obtained by its use, or by the use of other stimulating ammoniacal manures, such as nitrate of soda. Liebig says: "The presence in the soil of a sufficient quantity of potash and silicic acid is always pre-supposed when guano increases the produce of corn; and in a soil rich in potash and magnesia, the application of guano alone ensures a succession of crops of such plants which, like

potatoes, require for their growth chiefly potash and magnesia. Meadows and corn fields which gave at first large crops with guano, become at last, by the continuous use of this agent, frequently so drained of silicic acid and potash as to lose for many years their original productiveness." The term manure is so general and indefinite that we must interpret it as meaning a substance containing sundry elements of plant food in very various and uncertain qualities and proportions. One dung-heap may be a mass of wet straw, with a very few elements of plant food; another, of equal or less size, may contain many times the amount of plant food, and be of proportionate value. Science comes to our aid, and tells us that the principal elements of plant food are phosphate of lime, potash, magnesia, and ammonia. Practice has taught us that the manure from cake-fed animals excels every other. This is because the ashes of cake are rich in potash, magnesia, and phosphate of lime, and we may, therefore, safely conclude that the growth of flax is very exhausting to the soil, if the seed and straw are sold off the farm. But independently of the dung-heap, we should get from science replies to the following questions: How much of plant food have we already in our soil? In which kind is it deficient or redundant? How much of it is in an available or unavailable condition? Why is it necessary, in order to get a crop, to have in the soil one hundred times as much food as the plant requires? How do the plants feed in the soil? Why is it that plant food remains useless to the plant unless its fibres attach themselves to the particular granules of soil on which the plant food is condensed? Why is it that certain artificial manures are most valuable when applied to some soils and useless in others? Why is it that we cannot manure the subsoil through the top soil? Why is it that water cannot wash away or remove the plant food when it is condensed on the granules of soil? How is it that compound manures, solid and liquid, when placed in the soil, are at once decomposed by the soil, and the plant food elements separated, abstracted, and retained condensed on each granule of soil? For a full and perfect comprehension of these important agricultural questions, I would recommend you to study Baron Liebig's great works, for the profit of farming is very dependent on the knowledge therein contained. A great deal of money which is now wasted might be saved, if we knew a little more about the chemistry or science of agriculture, or if we consulted those who do know. Here is one very striking instance. One farmer uses nitrate of soda and salt, and finds it very profitable; when this news spreads, many more farmers use nitrate of soda and salt, and find no benefit from it. Why is this so? The success of this application depends upon there being in the upper or lower soil a quantity of phosphate of lime that wants dissolving and diffusing. Where this is the case nitrate of soda succeeds, but where there is no undissolved phosphate it more than fails, for it merely forces a surplus of high-coloured and mildewed straw, to the injury of the kernel. Nitrate of soda and salt possess this advantage, they are not fixed and retained in the surface-soil like ammonia, potash, and phosphate of lime, but are free to circulate through the soil down to the drains, and can therefore dissolve any phosphate of lime that they meet with in the soil and subsoil. A gentleman near Carshalton informs me that for many years he has obtained large corn crops, merely using as manure nitrate of soda. His soil must, I presume, super-abound with undissolved phosphate of lime. He has several hundred acres. On some Norfolk farms where, by cake-feeding and artificial manures, there is much phosphate of lime in the soil, nitrate of soda and salt are found profitable. If we have enough phosphate of lime in an available condition

in our soil by nature or by high cake and corn feeding, superphosphate is not needed, and the money paid for it is wasted while in soils deficient in phosphate of lime it is "the key of the position." Science explains no end of apparent anomalies which puzzle the farmer, and cause him heavy loss. For instance, under the ordinary lease restrictions, forbidding the sale of roots, green crops, hay, and straw, there will be in the surface soil a surplus or accumulation of potash. In such cases guano or superphosphate may be found profitable, but on light and calcareous soils, deficient in potash, the forcing of beet-roots, or potatoes, or turnips for sale by means of guano or other manures deficient in potash will prove exhaustive. I hardly ever use straw manure on my light land because (and here is the point) all the turnips and green crops are consumed where they grow by sheep folded on the land, consuming supplemental food, such as cake, corn, malt-combs, bran, cut hay, and straw chaff. All my straw manure goes to the heavy land, from whence the roots are drawn off. Sugar-beet exhausts much potash, therefore sellers of beetroot should use farm-yard manure, for they do not get back the potash in the pulp. Guano would, in their case, soon exhaust the soil of potash. I quite believe that much straw might be sold off certain light land farms, if the roots and green crops are fed off where they grow with cake and corn. *As Regards the Mode of Applying Manure.*—How often we hear that top-dressings of guano, &c., have done little good except for surface or shallow-rooted plants. Liebig thus explains it: two to three inches of surface soil will, if finely pulverised, arrest and fix a top-dressing of guano, so that the lower soil gets little or none of it, and thus, to deep-rooted plants, it is rendered unavailable. This explains why we can only grow clover at long intervals. I always use guano and salt for wheat after beans or after mangel. I sow it broadcast and plough it in. It is very desirable to mix manure with the subsoil for deep-rooted plants. I accomplish this by trench-ploughing, one plough without the best following in the track of the first plough. *Brickdust or Burnt Subsoil Clay*, is a certain way of getting profit on our cold, tenacious, birdlime-like tile earth, almost free from calcareous matter. I burned thousands of loads when I first took my farm in hand, and applied about 80 loads an acre to several fields. The land never entirely forgets it, although 28 years have elapsed; but it is desirable to repeat the dressing at intervals. I have continued burning at intervals. My ploughmen often speak of the altered and more friable state of the land. The alkalis contained in these soils are set free by burning, and become food for plants, especially root crops. When the chemist in his laboratory wishes to get all the potash out of clay, he first uses dilute acids, and finally gets the whole of it by burning the clay; in fact, the unavailable is thus converted into the available. An inch deep of clay per acre is about 100 tons; so we may safely burn away our stiff clays, some of them being 150 feet deep. It is summer work. The clay should be sun-dried before burning. Mr. Randall, in Worcestershire, burns earth all the year round. It costs me about 1s. per ton on the farm; chalk costs 5s. per ton, including cartage. You may bring up and burn as much of the subsoil as you please; there need be no fear of weeds, or wild oats, or insects, for the tremendous heat shatters and pulverises even the stones. Thatch clamps of burned earth and you will never be short of bedding, in case you wish to sell or economise your straw. The clay must all be well dried before burning, and when once started the red-hot earth will continue to burn that which you gradually add to it (rains, of course excepted). Burned earth is very much improved as bedding by intermixing with it straw, cut into short lengths, as suggested by Professor Voelcker. You may read all about burned clay practically and chemically,

as described by Randell, Way, Voelcker, and others in the *Journal* of the Royal Agricultural Society. It is worth studying as a source of farm profit. Burned clay should be applied to the soil at intervals, for it gradually sinks into the sub-soil, and always acts most powerfully the first few years after its application. It surprises me that so little of this burning is done, for there are thousands of miles of old weedy banks and wretched robber pollards that want roasting, and must be removed if we are to have steam cultivation. Our poor, wretched, unproductive fields of twitch and weeds (miscalled permanent pasture), on hide-bound clays, would become fertile corn and fodder fields by paring and burning. I had one such piece, which declined to be improved in any other way; so I shallow-ploughed it, and burned or roasted the heaps. For twenty odd years it has continued to yield splendid crops of wheat, beans, oats, tares, roots, clover, &c. This enlightened me as to the national loss arising to the country by poor pastures—mere beds of weeds. By burning clay into brickdust, we accomplish in one year more than could be effected by cultivation in twenty years—we at once convert the unavailable, or chemical, into available, or physical. In the former state, the principal elements of plants (potash, phosphate of lime, magnesia, and silicic acid) are useless; in the latter, they are useful. It is like unlocking and setting free a treasure that has been idle and unproductive for thousands of years, and turning it to profitable account. Landowners need not fear exhaustion of the soil by this burning of clay, provided the farming is on the usual course, because the manurial ingredients that I have named are incombustible, or rather, non-gaseous, and can neither be sent into, or got from, the air, like carbonic acid and ammonia. This is the great and true mineral theory propounded and expressed by Liebig—that if we have the incombustible elements of plant food in the soil in a physical (available) condition, the combustible will be obtained from the atmosphere by turnip and other fodder crops. I am a firm believer in this theory. Superphosphate of lime and bones for turnips have unmistakably proved this theory to be true; for its application is a cheap mode of restoring to the soil the bone-earth sent away from the farm in grain and animals. Liebig says (p. 135, *Chemistry in its Application to Agriculture and Physiology*, 3rd edition): “Common potter’s clay forms generally very sterile soil, although it contains within it all the conditions for the luxuriant growth of plants; but the mere presence of these conditions does not suffice to render them useful to vegetation. The soil must be accessible to air, oxygen, and carbonic acid, for these are the principal conditions to favour the development of the roots. Its constituents must be contained in a state fit to be taken up by plants. Plastic clay [our Tiptree clay, or tile-earth] is deficient in all these properties, but they are communicated to it by a gentle calcination.” *Plenty of Manure “Gratis.”*—One of the most important principles established by Liebig is the rotation of ammonia-collecting with ammonia-dispersing crops—that is, root and green crops alternating with cereals: experience has taught us as farmers this, but we never knew why it was so beneficial and necessary. I would strongly recommend you to read from p. 315 to p. 334 of his *Natural Laws of Husbandry*; for, if possible, it more deeply affects the profits of farming than any other passage of his works. More than half the substance of our crops (ammonia and carbonic acid) is got from the air, and that is cheaper than having to purchase them at great cost. There is a wonderful affinity between the earth and the air, if we permit them to come in contact by deep, good, and frequent cultivation. Poor permanent pasture is unprofitable, because it deprives the land of the benefits resulting from cultivation. Three years in pasture are quite long enough for certain soils. I never allow clover more than one year, and never mix ryegrass with it. *A Hint to our War Minister.*—The following extract from Liebig’s *Natural Laws of Husbandry*, p. 272 (in which will be found ample details of the cost, returns, &c.), will show the great value of the excrement of man: “In the fortress of Rastadt, and in the soldiers’ barracks of Baden generally, the privies are so constructed that the seats open, through wide funnels, into casks fixed upon carts. By this means, the whole of the excrement, both fluid and solid, is collected without the least loss. When the casks are full they are replaced by empty ones. The farmers about Rastadt and the other garrison towns, having found out by experience

the powerful fertilising effects of these excrements upon their fields, now pay for every full cask a certain sum (still rising in price every year), which not only has long since repaid the original outlay, besides covering the annual cost of maintenance, repairs, &c., but actually leaves a handsome profit to the department. The results brought about in these districts are highly interesting. Sandy wastes, more particularly in the vicinity of Rastadt and Carlsruhe, have been turned into smiling corn-fields of great fertility.”

ROTATION OF CROPS.—Liebig attaches great importance to a rotation of crops (see pp. 89, 90, 328 of the *Natural Laws of Husbandry*). He clearly explains the propriety of and necessity for a rotation of deep and strong-rooted with shallow and fibrous-rooted plants, and the alternation of cereal and root or green crops, the latter as collectors of a store of ammonia. Is the four-course rotation adapted to modern farming? It no doubt resulted from a general and very long course of observation by practical farmers, who, after trying, unsuccessfully and successfully, various modes of cropping, adopted the latter, especially after the introduction of clover, then turnips, more than a century ago. The four-course also distributes well the horse and manual labour of the farm. The rotation is one that agricultural science (had it then existed) would have indicated and suggested—that is, the alternation of broad-leaved and narrow-leaved, and deep-feeding and shallow-feeding plants, and of plants requiring the elements of soil and manure in varying qualities, quantities, proportions, and positions. That was at a time when we were emerging from pasture, and when we knew nothing of guano, bones, and other artificial manures, and when there were no oilcakes and other foreign feeding-stuffs, few good roads, and no railways to convey fruit, vegetables, hay, and straw to towns and cities, and to bring back town or artificial manures and feeding-stuffs. There were then no thrashing-machines, no reaping-machines to hasten the harvest, no steam-machines to make short work of autumn cultivation, no drills to seed the land rapidly. There was formerly no fresh beef at Christmas before clover and turnips were introduced. Without imported food or artificial manures the farm had to be fertilised with its own produce, which rendered necessary restrictive clauses, forbidding the selling off of hay, straw, or roots, and the breaking up of pasture. Landowners had no doubt observed that when pastures were broken up the continued succession of corn crops exhausted the land, and ultimately impoverished both the tenant and landowner. Under the new and altered circumstances there will probably arise a considerable modification and reduction of these restrictions, and, in fact, it has already been done on that well-managed Holkham estate, which has ever been, from the time of the great Coke, a trusty and admirable model of agricultural progress and success. The present noble owner has initiated much good by the recent publication of the terms of his modern lease, which has given the tenant free action as to the mode of cropping his land and selling off his crops, provided he does not thereby impair the natural fertility of the soil. Science, and the public discussions at our numerous farmers’ clubs and agricultural societies, have, I hope, sufficiently enlightened us, so that the old and ruinous error of believing that you could always be taking out of the agricultural purse without a periodical refilling, will gradually disappear. The materials for maintaining or restoring fertility are now abundant, and will be more so when supplemented by town sewage. We shall then no longer be told by an Irish tenant, “This good land absolutely produced 17 successive crops of oats, but, bad luck to me! the last was a complete failure.” A friend from Ireland related this to me as a fact within his own knowledge, and I was once offered a Welsh hill farm to purchase at a merely nominal price, the tenant having taken seven crops of oats in succession, the last two not having reproduced the quantity sown as seed (7 bush. per acre!). Truth, even in agriculture, is sometimes more strange than fiction, which it is well to bear in mind when we are congratulating ourselves on the admirable condition of certain well-farmed and well-known districts. These are the sunny sides of British agriculture, but there are a great many—far too many—dark, shady, and unsatisfactory districts which will not at present, or for a long time to come, bear the light of either public investigation or congratulation. The old-school farmer, who was accustomed to look to the natural production of the soil for his maintenance, is now, unless he adapts himself to modern practice, in an unfavourable

position. Rent and other charges have greatly increased, and he has to compete, in his sales, with farmers who have, by adopting and availing themselves of modern advantages and practices, been enabled to produce their meat and corn more cheaply than he has done. I pass many a pleasant and instructive evening with Baron Liebig, or rather, in my study, with his great works on agriculture; and I venture to predict that in 1972 they will be found in the library of every intelligent British farmer. The works of that most profound of agricultural philosophers can only be thoroughly comprehended and appreciated by a frequent reconsideration of their contents. He has lighted up the hitherto dark and difficult path of the natural laws of husbandry. I do not fail to recognise and appreciate the merits of the various talented chemists who have issued from Liebig's lecture-rooms and laboratory (especially one whom we are proud to call a member of our Club), but I look upon Liebig as the grand and original expounder of sound agricultural principles, which will endure as long as civilised agriculture exists, and will form, in all times, a safe basis for agricultural practice. There are certain evils attending the four-course rotation under the usual lease restrictions. Barley, after turnips fed off with cake, is frequently injured by over-luxuriance, and the young clover destroyed by the laid crop of barley. High farming produces a large quantity of straw. On the best modern principles of covered and enclosed yards with paved floors a much smaller proportion of straw is required for bedding than in the ordinary open farmyards exposed to rainfall; but, even in the latter case, there is on a vast number of farms a great difficulty in getting the straw "down" or "rotted," and it is no uncommon thing to see on farms with too little live stock the roads around and leading to the farmyard deeply and frequently littered with straw, in order to rot or convert it into a miscalled manure. Straw thus treated is worth as manure (see *Lawses*) only 12s. 6d. a ton. It could be sold for papermaking at triple that price, and as food it is worth 40s. per ton (see *Horsfall*, vols. xvii. and xviii., *Royal Agricultural Society's Journal*). But if, on ordinary farms, there is not even now capital enough to convert all the straw into good manure in open yards, it is evident the greatly-increased capital required in live stock—where covered yards are used, and especially where much straw is given as food mixed with cake, corn, roots, malt culms, and bran—could not, with our present agricultural notions, be found. I have £6 per acre usually in live stock only, and even so have much hay and straw to sell. If it were, as it ought to be, all cut into claff mixed with cake, corn, &c., and consumed by cattle, much more capital than I have in live stock would be required. Hay is in some cases wasted, either thrown on to pastures or put into racks for horses and cattle, to pick out the dainty pieces and tread the rest under foot. In my case I have sold since Christmas more than £300 of surplus hay of last year's growth, and some straw, because I had not capital or animals enough to consume it, and yet I have now only 8 acres of pasture. It is a hard case for a farmer not to be allowed to sell clover and hay when it brings £5 or £6 per ton (mine was sold at £5 this year), for they could bring back more profitable cake, or guano, or other manures, to compensate the land; near great towns and cities there is always a market and demand for straw and hay. No doubt the prohibition to sell hay and straw or roots arose from the fact that some farmers (at any rate in ancient times) would sell everything off the land, regardless of consequences; and in those times they could get neither cake, guano, bones, superphosphate, or artificial manures to compensate and keep up fertility. I am afraid that even now there are still some who don't believe in exhaustion, and so keep constantly taking out of the purse without refilling it, to their ultimate loss. I except the members of our Club, who understand their business too well for that. As regards the rotation of crops the great variety in the proportion of elements that constitute various plants, and their depths and modes of feeding, indicates the necessity for a rotation or alternation of crops. A striking instance of this kind is recorded in the *Royal Agricultural Society's Journal*, vol. xiii., p. 409, a well-deserved prize essay, by Mr. Hemming, whose beans after seed rye were a fine crop, while in the same field, following the green rye (mowed for soiling, the land then guanoed and sown with white turnips drawn off), the beans actually stopped all growth after 6 inches high, and did not even seed, although sown in the same field and at the same time as the successful bean crop.

This did not arise from infertility of the soil, but because the aldermanic turnips had devoured all the available potash, while the seeded rye crop did not want any, or very little potash; the beans lost their dinner (potash) and died off, thus proving Liebig's great theory, that, one necessary ingredient in the growth of a plant being absent, renders all the others useless—just as in house building, if any one material is wanting (say either water, lime, bricks, or any other), the house cannot be built, although you have abundance of all the rest. This led Mr. Hemming (who had been rather astonished) to a chemical inquiry, which he gave to the public in the *Society's Journal*, and richly earned and deserved our thanks, as well as the prize awarded to him. Where the roots of an often-cut hedge, or often-thinned trees have had long possession of the soil, and attached themselves to nearly every granule, there is little hope of obtaining good crops from the exhausted soil. I can distinctly trace, by the inferiority of crop (now wheat) the site of some old baulks, which I removed 30 years ago, and it will probably be visible for another 30—a great deal of land in our neighbourhood was once forest—chalking does some good on old wood land. Farmers know that they cannot raise a new thorn fence on the ground on which a previous and old thorn fence was grown. How well Liebig, in his great work, the *Natural Laws of Husbandry*, explains all these apparent mysteries, and why deep and shallow-rooted plants should alternate!

AMERICAN AGRICULTURE.—It may be interesting to my brother agriculturists to know how our juvenile American cousins are progressing agriculturally. The latest returns, which I annex, give an astounding proof of their enterprise, industry, and power, especially when we consider that they only exceed us in population by some six millions. No doubt the better education of the population has very much to do with it, for every man, woman, and child is there taught, free of any expense, to read, write, and cypher. Some years ago they had 120,000 free public schools and colleges—well endowed by Government grants of land and by willing taxation. Farm labourers must be well off there, with 4s. 2d. a day, and cheap and abundant provisions.

EXTRACT FROM THE AGRICULTURAL RETURNS JUST ISSUED BY OUR BOARD OF TRADE.

United Kingdom.		United States of America.	
Population.....	31,609,910	Population	35,923,210
Total area in English statute acres exclusive of lakes and rivers.....	76,405,965	Total area in English statute acres including rivers and lakes	2,095,600,000
	Acres.		Acres.
Wheat	3,831,654	Wheat	19,181,004
Barley	2,616,965	Barley	1,025,793
Oats	4,362,139	Oats	9,461,441
Maize.....	—	Maize	37,103,245
Cotton	—	Cotton	7,750,000
Sugar-cane.....	—	Sugar-cane	95,334
Tobacco	—	Tobacco	481,101
Beans, peas, root and other crops, about	6,500,000	} Not enumerated.	
Permanent pasture for hay and grazing	22,525,761		
Grass under rotation	6,236,588		
			Acree of meadows and permanent pasture for hay.....	18,591,281
Horses	2,648,223	Horses	8,248,800
Cattle	9,346,216	Cattle	25,434,100
Sheep and lambs... ..	31,403,500	Sheep and lambs	40,853,000
Pigs	4,136,616	Pigs	26,751,400

In conclusion, I am by no means satisfied with the general condition of British agriculture. It must be considered as resting at present on an unsound foundation, for exhaustion of the soil is extensively carried on. The annual produce of 20,000 acres comes into London daily, and daily passes through

the sewers into the Thames, instead of returning to fertilise the land. The same suicidal process is going on in most of our other great cities. Common sense tells us what the result of this must be. If the voidances resulting from the vast food imports which we consume annually were economised, our country would be greatly fertilised and enriched. By a false and ignorant delicacy we look upon human voidances as a horrible nuisance to be got rid of. If we knew and considered that our future food—in fact, our vitality—depended upon the careful utilising of these voidances, we should take a more rational view of the matter. In this respect the Chinese and Japanese are far before us in common sense and civilisation. Liebig—how forcibly and painfully!—illustrates our dangers at p. 236 of his *Natural Laws of Husbandry*: “No intelligent man who contemplates the present state of agriculture with an unbiassed mind can remain in doubt, even for a moment, as to the stage which husbandry has reached in Europe. We find that all countries and regions of the earth, where man has omitted to restore to the land the conditions of its continued fertility, after having attained the culminating period of the greatest density of population, fall into a state of barrenness and desolation. Historians are wont to attribute the decay of nations to political events and social causes. These may, indeed, have greatly contributed to the result; but we may well ask whether some far deeper cause, not so easily recognised by historians, has not produced these events in the lives of nations, and whether most of the exterminating wars between different races may not have sprung from the inexorable law of self-preservation? Nations, like men, pass from youth to age, and then die out—so it may appear to the superficial observer; but if we look at the matter a little more closely, we shall find that as the conditions for the continuance of the human race, which Nature has placed in the ground, are very limited and readily exhausted, the nations that have disappeared from the earth have dug their own graves by not knowing how to preserve these conditions. Nations (like China and Japan) who know how to preserve these conditions of life do not die out. Not the fertility of the earth, but the duration of that fertility lies within the power of the human will. In the final result, it comes very much to the same thing, whether a nation gradually declines upon a soil constantly diminishing in fertility, or whether, being a stronger race, it maintains its own existence by exterminating and taking the place of another people upon a land richer in the conditions of life. Everyone who is at all acquainted with the natural conditions of agriculture must perceive that the method of culture, practised for centuries in most countries, could not but inevitably impoverish and exhaust even the most fruitful lands; can it then be supposed that there will be any exception in the case of cultivated lands in Europe, and that like causes will not produce like effects?” Liebig says, p. 226 of his *Natural Laws of Husbandry*: “How paltry and insignificant do all our discoveries and inventions appear compared to what is in the power of the agriculturist to achieve! All our advances in arts and sciences are of no avail in increasing the conditions of human existence; and though a small fraction of society may by their means be gainers in material and intellectual enjoyment, the load of misery weighing upon the great mass of the people remains the same. A hungry man cares not for preaching, and a child that is to learn anything at school must not be sent there with an empty stomach. Every step in science, however, made by agriculture serves to alleviate the sufferings and troubles of mankind, and to make the human mind susceptible and capable of appreciating the good and the beautiful that art and science present to us. Improvements in agriculture constitute the only solid foundation for further progress in all other branches of knowledge.” Liebig says, p. 241 of his *Natural Laws of Husbandry*: “There is no profession which for its successful practice requires a larger extent of knowledge than agriculture, and none in which the actual ignorance is greater.” No doubt he alludes to our want of knowledge of the causes of our successes or failures. Page 203: “It is a very essential part of the farmer’s business to study the nature of his fields, and to discover which of the nutritive substances, useful to plants, his land contains in preponderating quantity; for thus he will know how to make a right selection of such plants as require for their development a superabundance of these constituents, and he will obtain the

greatest profit from his field when he knows what nutritive substances he must supply in due proportion to those which are already in abundance.” The late Richard Cobden, in writing to me about agriculture, said, “I was once vulgar enough to say that a full stomach and whole pair of breeches were the beginning of all morality and religion.” Let us, then, invoke the aid of science in the production of more food, and thus increase agricultural profit. To science we owe most of the comforts of life, such as health, clothing, literature, and locomotion. Why should our food alone be excepted from its influence?

The Rev. E. SMYTHIES (Hathern) said in responding to the Chairman’s appeal, he would venture to offer a few observations. He thought it would be accepted as true that Mr. Mechi might be looked upon as the prince of reading farmers, because for many years he had contributed to this Club and elsewhere the results of his most extensive and careful study of the principles involved in British farming (Hear, hear), especially in regard to the increase in the food of the people. He supposed there was no man in the world who had gone through so much ridicule and opposition, and experienced such ingratitude as Mr. Mechi; but Mr. Mechi had always met that in a spirit of fairness, good-nature, and forbearance (Hear, hear) almost without a parallel. Whatever might be the right or the wrong of Mr. Mechi’s principles, he had met with an enormous amount of opposition; but the jeering with which his utterances had been received had been met with the most wonderful amount of good nature; therefore, Mr. Mechi deserved well of this Club and of the country at large (Hear, hear). He (Mr. Smythies) was not now saying a word about the correctness of Mr. Mechi’s principles, whether right or wrong; but there was no man who had striven so much as Mr. Mechi had done for the interests of British agriculture, and no man who had met ridicule so quietly and calmly as he had done (Hear, hear). Mr. Mechi had striven hard, from his point of view, to represent to the country at large what he conceived to be the true principles upon which farming should be carried on so as to produce the maximum of corn or meat under given circumstances; but Mr. Mechi made in the outset a capital mistake, which, he perhaps was not responsible for. He invested his money in a part of the world which he (Mr. Smythies) knew, from personal knowledge, was about the very poorest and wretchedest to be found in the whole kingdom. He (Mr. Smythies) had heard his father say the land was so bad that it would not hold the scent of a fox (laughter) and hounds never could hunt over Tiptree Heath. Mr. Mechi therefore began his splendid series of experiments upon a portion of the country that was the very worst perhaps that the sun shines on; and in that he was unfortunate, because when he (Mr. Smythies) had told of his results in other and richer parts of the country, the reply was: “Oh! we think nothing of that—we can do that here.” The real cause of that was that Mr. Mechi began in a country where the land was of the poorest kind; nevertheless, Mr. Mechi deserved well of the country, notwithstanding the unfortunate mistake he made in beginning to farm in such a district. What had Mr. Mechi done on his tile-clay land, which was the poorest stuff ever seen? Many years ago, he (Mr. Smythies) saw it cultivated to the depth of 14 inches—and to that depth it was a black mass of soil like a Battersea market-garden—and Mr. Mechi had produced results upon that land such as the kingdom could not produce elsewhere. As to his balance-sheet, he (Mr. Smythies) did not say a word (laughter), but he contended that Mr. Mechi deserved well and not ill of the British farmer, because he had done his utmost to see what could be done with high-farming (Hear, hear). This led to a question upon which he (Mr. Smythies) had some little personal knowledge, viz., whether Mr. Mechi, in his experiments, and mode, and notions of farming, had deserved well of the British farming public; in other words, whether he had done good to the general cause of the tenant-farmer, or whether he had done evil. He (Mr. Smythies) maintained, without the slightest hesitation, that Mr. Mechi had done immeasurable good (Hear, hear). He contended that, notwithstanding what had been said about Mr. Mechi publishing to the world what might be done by high-farming, which, it was said, would only tend to raise rents, the best thing that could happen for the interests of the tenant-farmers was that landlords should know the actual truth about farming. He might give one illustration. A landlord he knew was told

that one of his tenants who was farming 500 acres had produced 5 quarters of wheat per acre, and the landlord at once sat down and made a calculation that his tenant was producing 2,500 quarters of wheat, which he reckoned at the market price would produce so much, apparently not aware that the tenant would have not more than a quarter of his farm under wheat cultivation (laughter). This was done in perfect *bona fides* on the part of the landlord, and he (Mr. Smythies) believed it was a fair illustration of the knowledge which many landlords had of what their tenants made out of their farms (laughter and No, no). He maintained that it was a fair instance, and if the gentlemen present were placed under happier circumstances he rejoiced to hear it; but he had heard of similar instances, and therefore anything which tended to make known to the world the real circumstances of the British agriculturist was an immense benefit to the British tenant-farmer. With regard to the general principles of the improvement of land which Mr. Mechi had dwelt upon, he (Mr. Smythies) desired to say that the man who undertook that sort of thing had a great amount of ridicule to go through, which was hard to bear. The first time he attended market he would find his neighbours pointing at him, and saying, "Here is the man who is coming to teach us all how to farm. You will see he will soon be tired of it." He would be the subject of suspicion, dislike, and general prejudice on the part of those around him. That was what a man had to face who undertook to try and improve the general average of the produce of the land. Therefore the man who did that steadfastly, and brought a good result, deserved credit from the nation at large. But what followed? Why the very persons who thus ridiculed the man, before long imitated his plans, bought manure, cultivated deeper, put in a better class of seed, began to plough, straighter, and deeper, and perhaps to drain their land; but though they did these things they never once acknowledged that their first idea of such a thing was derived from the man who had been the subject of their jeers and gibes perhaps for ten years before (Hear, hear). One or two practical points in Mr. Mechi's paper he wished to notice; and the first was that of burning clay. He should like to hear of some more practical experience on this subject. He believed that in regard to the clay that Mr. Mechi spoke of—the tile clay—and the London clay and plastic clay—burning was beneficial; but that when they went farther to the westward burning was injurious. At all events he had been told that with the Kemmeridge and Portland clays and clay intermixed with the Keuper marls, burning was injurious, because burning did more harm to it chemically than it did good to it mechanically; and that was also his own experience. One farmer said to him: "If you will put thirty shillings' worth of old rags into the clay, you will do it more good than by burning it;" and he was inclined to think that chemically and mechanically they could better improve clay soil in other ways than by burning it. At all events the question of burning clay which might be good for the London and plastic clays did not apply throughout the country. As to Mr. Mechi's percentages, he believed Mr. Mechi had spoken about stocking land at £6 per acre. He had friends who could easily graze a beast per acre, but who could not buy that beast at a store under £17 or £18.

Mr. MECHE: Have they only six acres of pastures as I have?

The Rev. E. SMYTHIES said suppose they had half pasture and half arable, something like from £10 to £12 an acre would be a moderate amount; but Mr. Mechi's calculation was £4 an acre as the average throughout the kingdom; but he (Mr. Smythies) should be inclined to put from £14 to £16 an acre as nearer the estimate; and at present prices that was the lowest a man could farm at profitably. Notwithstanding these points, however, he thanked Mr. Mechi for his able paper, and for what he had done on behalf of British agriculture (Hear, hear).

Mr. C. S. READ, M.P., said he desired to answer the last speaker in regard to the scientific and theoretical farmers when they came into a district. Mr. Smythies said they were pool-pooled and put down, and were objects of scorn and derision. He (Mr. Read) thought it depended on how those scientific gentlemen comported themselves (Hear, hear). If they came fancying that everybody was ignorant and that they alone knew the secret of farming, and if they put forth their various nostrums and said that they alone were right, then what Mr. Smythies had said might be true; but on the other

hand he (Mr. Read) would say that the majority of English farmers of the present day hailed with delight any gentleman who would come and teach them how to improve their agriculture, especially if they would do it practically, and not all from books and on theory (Hear, hear). Only last December the Committee of the Farmers' Club received the melancholy news that their esteemed friend Mr. Mechi was going to withdraw himself from the Committee and Club; and the Club hesitated to receive the notice and asked Mr. Mechi to reconsider the matter; and the result was that to-night Mr. Mechi was quite himself again (Hear, hear). His natural force had by no means abated (Hear, hear); he was always telling, and always amusing, and now he had gone beyond himself in scientific researches (laughter and "Hear, hear"). He (Mr. Read) did not wish to say anything against science. A good deal was said in favour of science apparently to the disparagement of practice; and what he wanted to say was not in regard to practice without science, but practice with science (Hear, hear). What had science taught the farmer that he did not know before? Could Professor Voelcker say what results chemistry had told the farmer that he did not know twenty years ago? He knew that science had explained the *causes*, and most interesting, entertaining, and profitable, that explanation might be; but at the same time, had the farmer not known that the rotation of crops, even from the time of the classic writers, was necessary? Had they not known, before the days of Arthur Young, all the advantages of clay burning, which now seemed to be the newest hobby at Tiptree? Had they not known that oilcake manure was best; that rape dust guano, and even the more modern introduction of what used to be known as salt-petre? However valuable they might regard science as an adjunct to a farmer, they must not suppose it did more than tell the farmer the causes of all the results which he had long ago made out by practice (Hear, hear). Referring to Mr. Mechi's observations as to the quantity of wheat imported, they must remember that economical reasons governed that, and that if wheat could be grown cheaper abroad than here, wheat would go out of cultivation here in the end, although it might be much better for the nation that the land should be kept as arable land; but on the other hand, with the increased expenses on arable land in the shape of labour, there was no doubt that the land in this country would rather be turned into grass. With regard to Mr. Mechi's facts, he would like to touch on one, viz., his idea of manuring the subsoil, and he would convict him out of his own mouth, for Mr. Mechi said: "You cannot manure the subsoil because the whole of the manure is retained in the top soil;" and then he said that when he applied a lot of liquid manure to a field that was drained 5 feet deep, the water ran through the subsoil and emerged from the drain discoloured.

Mr. MECHE: Down the cracks.

Mr. READ: Down the cracks; but it proved that the liquid manure went into the subsoil. Every tiller in Norfolk knew that they did not want to manure the subsoil; the great thing was to have the manure in the topsoil. If Mr. Mechi were to sow a quantity of guano in a hungry gravel soil, he would find a portion of the manure washed far below the roots of the plant. Then Mr. Mechi had referred to sewage. What had science done for sewage and for the manure of towns? Sanitary and hydraulic engineers had done more harm than anyone else by sweeping valuable manure into the nearest stream to the great detriment of the health of the neighbourhood. What had science done in teaching the causes of clover sickness, though that was a matter in which they might expect science to assist? Had the chemist told them how they could strengthen the straw of their cereals?

Mr. MECHE: Yes.

Mr. READ said he would like to know what? He would guarantee anyone a fair fortune who would say how in England they could maintain a large crop of cereals without the danger of their lodging. The man who discovered that would be a benefactor to agriculture. The limit to the cultivation of cereals at present was, that after growing a certain quantity of wheat or barley, and especially barley, the straw went down, and inferior yields were afterwards produced. In conclusion, Mr. Read said that they must have practice and science combined. He believed it was Baron Liebig who said, "There is more nourishment in bean-straw than clover-hay"; and an

old farmer who heard this said, "But if I were a horse I should still prefer the hay" (laughter).

Dr. VOELCKER said he felt bound to make some defence on behalf of the science of agriculture against the not very flattering remarks that had fallen from Mr. Read. If what Mr. Read said was true, men of science were very useless creatures. Of what use were they if they had never done anything for the farmer, and were never likely to do anything? Now, he believed that a great deal had been done for the farmer by scientific men, a great deal was being done, and a great deal of useful work lay before them to do in the future. It was, however, a bad plan for a man to blow his own trumpet, and he did not like to stand there and blow the trumpet of science as against practice, but he hoped some one would take up the cudgels against some of the views expressed by Mr. Read. Some of the remarks which had been made about burnt clay struck him as a forcible illustration that science was of real practical value to the farmer. It was stated that in some cases the burning of clay did not improve it, while in other cases it effected a very great improvement—and it was a very great improvement to Mr. Meechi's stiff clay. Now, it was just on such a point as that that science could enlighten them, for it told them from time to time whether or not the fertilizing elements were developed and rendered valuable by burning. Mr. Meechi's clay abounded in silicates of potash and soda in a locked-up state, phosphate of lime, and other elements which on burning were rendered extremely useful for vegetation. Mr. Smythies had expressed some commiseration for Mr. Meechi, because he had had to contend with that poor Essex clay; but he (Professor Voelcker) differed entirely from Mr. Smythies on that point; he thought Mr. Meechi had shown great pluck in tackling that clay, and he would be rewarded for it in time if he were not rewarded already for the energy he had displayed in cultivating a soil which had the name for being very infertile, which in its natural state was sterile, and which, nevertheless, contained abundant stores of plant-food. That land needed burning and the application of lime, and especially to be worked by the steam plough, which he strongly advised Mr. Meechi to make use of, and then he need not be afraid of exhausting his soil. Some land might be exhausted in a very few years, but Mr. Meechi's stiff clay would stand very heavy cropping for a great many years upon an occasional dressing of the somewhat despised guano. Mr. Meechi, if he cultivated deeply his clay land, would find nothing more profitable than Peruvian guano, which was especially rich in ammonia, and the richer in ammonia it was the more profitable it was on these stiff clays. He had no fear of the exhaustion of land after a time where guano was constantly applied. It had been asserted that guano was exhaustive to certain lands: he had made every inquiry and he could not find it so. He always found the more guano the heavier the crop, and he had not found an instance of land exhausted by it (Hear, hear). He had much more fear of the exhaustion of the supply of guano than of the exhaustion of the land. It was, indeed, a very serious question what they should do when the guano failed them. They would then be thrown upon the use of nitrate of soda, and it was as well that they should begin to see to what advantage nitrate of soda could be turned. There was great danger in using nitrate of soda injudiciously, for if there were not the mineral elements in the soil to build up the plant nitrate of soda would do no good. It was like plying with the whip a horse whose strength was gone. He had had opportunities of seeing the unfortunate influence of nitrate of soda on poor soils. At the same time it was a valuable assistance in conjunction with other manures—phosphatic manures, and potash salts. He did not altogether agree with Mr. Meechi on some of the chemical points upon which he had touched, nor did he agree on all those points with Baron Liebig. There was not a shrewder or more intelligent philosophical mind—and at the same time a good practical mind—than that of Baron Liebig. He was a man of very powerful perception, and if he had had the advantage of only a year or a couple of years' experience in this country he would have been the first man to modify many of the views he had expressed in rather strong language. And one of these points was with regard to the manuring of subsoils. He did not think that the farmer should ever apply manure to subsoils (Hear, hear). He (Professor Voelcker) would say to the farmers: "Don't manure subsoil of any kind, light or heavy; manure the topsoil, and keep the manuring elements as near

as you possibly can to the surface, so that the young plant may derive immediate advantage from the food prepared for it."

Mr. C. S. READ: Do you agree with Mr. Meechi that it is impossible to manure the subsoil through the topsoil?

Professor VOELCKER: I decidedly think that Mr. Meechi is wrong in that. The subsoil can be manured to a certain extent through the topsoil, and it is as well to bring up a little of the subsoil and get back the elements of fertility which have sunk down through the topsoil. This reminded him of certain facts which showed how careful we ought to be in generalising from what he would call half-understood facts in agricultural chemistry. It was very natural to make that mistake when a discovery was made, because we did not know the full extent of the facts involved. When it was discovered that plants absorbed ammonia, leaving the sulphuric acid to pass through the soil, it was thought that fertilising elements might be stored up in the soil and the soil become permanently enriched; but then it was not known how rapid were the changes which ammonia undergoes in the soil. It was a mistake to suppose that ammonia would remain permanently in the surface soil. It would get rapidly washed, in the shape of nitric acid, into the subsoil. Fertilising elements could not be permanently stored up in the soil. It was not possible permanently to improve the fertility of the land. The best thing the farmer should expect after applying artificial manures to the land was a heavy crop, and not to look forward to profit by the ultimate improvement of the soil. Frequent manuring was the most profitable mode of procedure, but to manure with a view to the future was in a great measure all moonshine. Unless they saw their money back which they expended in manure in the weight of the crop to which the artificial manure was applied, they had better keep their money in their pockets. If the manure was not utilised at once it passed, in a great measure, into the drainage-water, and he was not at all sure that there was not more fertilising matter lost in the drainage and carried away than ever passed into the crop.

Mr. TRETHERY (Silsoe) said Mr. Meechi had alluded to the difficulties of exchange, and of the obstacles in the way of improvement in land by the tenant for life. He was surprised at those remarks, because, under the present Act, changes might be effected at nominal prices. Two thousand acres of land—one thousand on each side—might be exchanged at a very trifling cost. As to the tenant for life, persons with a life interest in land were able to borrow money upon very fair terms, and pay off interest and principal in 25 to 30 years, and these opportunities were constantly being turned to account.

The CHAIRMAN: Yes, every day.

Mr. TRETHERY said he had had much personal experience of those transactions, and they worked exceedingly well. He regarded these facilities to be one of the greatest advantages of modern times in connection with land. With regard to guano he agreed with Professor Voelcker that, without exception, it always continued to improve the land. He had applied it season after season for twenty years, and never found the land getting exhausted; on the contrary, it doubled in value, and the more he used it the larger were his crops, whether he applied it to arable or pasture. As to burning, some people thought they might go on burning clays for any length of time, but that was a mistake; and, while on some soils burning was advantageous, on others it was perfectly useless. But farmers did not want to be told that by scientific men, they knew it by experience and practice; those who found it succeed went on with it, and others gave it up. Mr. Meechi was very hard upon grass land—he was for ploughing up everything that would not feed a beast, per acre. He could quite understand that on poor land, such as Mr. Meechi's. A moist climate and a rich soil were necessary for pasture, and Mr. Meechi had neither; but he would ask gentlemen of the Midland counties, especially those in the north and west, and those in Lancashire, Westmoreland, and Cumberland, what they would say to breaking up poor grass land? They would try to improve it as grass, for they would know they could not grow corn.

Mr. NEILD (Lancashire) he would be sorry to say anything in disparagement of book knowledge in connection

with farming, and he was sure that was not Mr. Read's object; but practice and experience were also of the utmost importance. He was of opinion that agriculture would never develop and prosper as it ought in this country until there was greater freedom in the land laws, and greater encouragement for the employment of capital in agriculture. They needed also a reduction of the burdens on land, and the benefits of those principles of free trade which were enjoyed by commerce. With regard to the respective merits of arable and pasture land, in Lancashire and Cheshire they were improving grass lands instead of breaking them up. Grass lands could be materially improved, and some people broke their hearts when they broke up their grass.

Mr. SIDNEY (Islington) complimented Mr. Mechi on the manner in which he had treated the subject, and upon the literary capacity he had always shown in controversy on agricultural topics. No doubt Baron Liebig had made some mistakes, as all great men had done. Among other errors he had first contended that guano was a mischievous manure, and he had laid it down that drainage would be the ruin of the country. The Baron, however, had a great prejudice against this country, which detracted somewhat from the value of his works as applied to English agriculture. As to the use of sewage on the land, it was entirely a question of expense. It was useless to compare this country with China, where they did not breed cattle and sheep on their land, and where the people were, no doubt, great gardeners, but did not grow crops like those grown in this country. He regretted to hear Mr. Read speak in deprecatory language with regard to science, because there was no fear of the young farmers of this generation debauching their minds with too much science. The danger was very much the other way. What Mr. Read had said, coming from a man occupying so high a position in relation to agricultural affairs, was liable to be misconstrued, and to do harm among the rising generation of farmers. He remembered the time when a man could not mention guano without meeting with derision. There was a time when farmers would not buy guano at £5 per ton.

Mr. READ: We never had the chance.

Mr. SIDNEY was glad to know that now scientific chemistry had spread throughout the length and breadth of the land.

Mr. TRASK (Northington) said he wished Mr. Mechi had given the Club the benefit of all his practice, and had not treated them to so much of the latest edition of Liebig. He did not at all believe that the man who farmed highly would be jeered at and ridiculed by his brother-farmers at market as Mr. Smythies had stated, and he did not think such an assertion ought to go forth to the public uncontradicted. If a man farmed his land better than his neighbours, and brought science to bear, and brought also practice with that science, that man would certainly not be laughed at by his neighbours. With regard to the four-course system, he did not quite agree with Mr. Read's remarks, because he was no believer in the general policy of the four-course system, and there were a great many practical farmers who did not believe in it. He believed if they took a succession of two white straw crops they might have a large crop of wheat and a large crop of barley, and no straw-lodging whatever. As to guano, a great many used it without making sure of the quality. Guano stood at a very high price, and if they did not get it good it did not answer their purpose. He had heard—he did not know whether it was true—that the Tiptree farm grew as large crops before Mr. Mechi took it as any other similar land in the county. He did not agree with the universal use of guano, for he believed that there were some of the ploughed up downs in the West of England which were thoroughly exhausted at this moment by the use of guano, and were therefore perfectly useless, and there were other lands that were similarly exhausted by the use of nitrate of soda. He was quite sure his friend, Mr. Read, did not mean to say anything to the prejudice of science; he simply meant that a young man should have all

the practice he could get, and all the theory he could remember.

Mr. GLENNY (Essex) was of opinion that they should manure as near the top as was possible, putting the manure on the surface.

Mr. SMYTH (Herts) in proposing a vote of thanks to Mr. Mechi for his paper, deprecated Mr. Smythies' remarks about the ignorance of landlords with respect to farming business, and said that as far as his experience went landlords thoroughly understood the matter.

The motion was seconded by Mr. CALDECOTT and carried.

Mr. MECHI, in acknowledging the compliment, observed that there could be no doubt upon one point, and that was as to the unmanured state of the subsoil generally in this country. He recommended farmers not to bring the sub-soil to the top, for if they did they would not grow a crop for many years. That was the reason they could not go on growing clover. When clover was first introduced into this country it was grown frequently, and that was because, in the course of centuries, enough manurial properties had passed through to the subsoil to cause those deep-rooted plants to flourish for a time and then to languish, so that now the periods between growing clover grew longer and longer. He could not grow it now in shorter intervals than eight years. It was the same with swedes—another deep-rooted plant—they could not be grown now as frequently or as successfully as they could at first. Liebig had explained that. Those deep-rooted plants flourished for a time on the manurial properties, which had in small quantities in the course of centuries gone through to the subsoil. Therefore, he thought they might assume that it was very difficult indeed to manure the *sub-soil* through the *top-soil*. As to the use of guano he was convinced that if it were used continually on land which was deficient in potash the land would be exhausted. Returning to the question of the subsoil, wherever he had applied manure to the lower soil he grew a better crop of mangold wurtzel. As to Mr. Trask's question about the fertility of Tiptree Hall Farm, before he took it the wheat grown was at the rate of 3½ quarters per acre, and since then he had grown as much as 7 quarters; he had removed three miles and a half of fences, and cultivated three times as deep as the land was cultivated before, and he certainly had three times as many corn stacks as they used to have before he took the farm.

On the motion of Mr. NEILD, seconded by Mr. MECHI, a vote of thanks was passed to Mr. Cheffins for his conduct in the chair.

The CHAIRMAN, in acknowledgments, remarked that they had had the advantage of a most useful and interesting discussion. As this would be their last meeting till November he wished the members a most prosperous season and a great harvest, and hoped they would all meet in good health at the Club next autumn.

The following new Members of the Club have been elected:

- Sir T. D. Acland, Bart., M.P., Killerton Park, Exeter.
- H. Bearcroft, Droitwich.
- J. Best, Jun., Hill Top, Tenbury.
- F. Clench, Lincoln.
- F. Clowes, Norwich.
- Rev. W. Dacre, Irthington, Carlisle.
- H. Dunkley, The Lounds, Blisworth.
- W. Foulkes, Longhurst House, Godalming.
- E. Marshallsay, Perrysfield, Godstone.
- C. Middleton, Holkham, Wells.
- J. Nethersole, Eastry, Sandwich.
- T. Neville, Shenstone House, Lichfield.
- R. Roberts, The Firs, Chester.
- J. Trevor, Nether-Stowey, Bridgwater.
- W. Withycombe, Gotherley, Bridgwater.

DEVON AND CORNWALL CHAMBER OF AGRICULTURE.

LOCAL TAXATION.

At a meeting, held at Plymouth, Mr. G. Soltau in the chair, Mr. PERRY read the following paper on Local Taxation:—

When land was the only property in the country, as a matter of course it had to bear the local burdens; and as long as an import duty was charged upon imported agricultural produce such an arrangement was reasonable. The removal of those duties, coupled with the extraordinary increase in the value of personal property, showed that a re-adjustment of taxation was required. There was no need to prove the injustice of confining Local Taxation to its present area—that was admitted. The practical way of looking at the question was to consider whether such important public services as the relief of the poor, the maintenance of the highways, county rate matters, sanitary action, and education should be dependent simply upon one-seventh of the property of the country, and made a charge only upon that. It was most important that these matters should be dealt with efficiently. The poor should be properly cared for, without giving a premium to indolence or breaking down feelings of independence. The highways should be kept in an efficient state of repair. The objects for which the county rates were levied must be efficiently maintained. He was persuaded, too, that sanitary regulations when properly carried out would be very expensive. And as to education, it was already clear that that would involve a greater expense than many had anticipated. Surely, all this was too heavy a burden to cast upon one class of property. Another way of looking at the operation of the present law was to regard its effect in checking the application of capital to land, by which the whole community suffered, seeing that the resources of the soil were not properly developed. Again, it checked the investment of capital in building labourers' dwellings, which now required so much improvement. He would, therefore, ease cottages of local taxation, and have landlords let plots for their erection on reasonable terms. Then they would see the labourers housing themselves like independent citizens. Moreover, these small properties would offer admirable investments for small capitalists. It would be beneficial in all cases of enclosure of waste lands that portions should be reserved at a fair rent to the landlords for building allotments. Recently they had had the satisfaction of seeing Sir Massey Lopes's motion carried over Sir Thomas Aekland's amendment by an overwhelming majority. The amendment went for dividing the rates between the owner and occupier; but he did not see that that would be so great a relief to the occupier as some people seemed to imagine. There were immense breadths of poor land in the North of Devon and elsewhere not worth more than 10s. an acre; and if the landlord gave up half the rent, how could the farmer be materially aided even by that, seeing that the great bulk of his expenditure was in labour and manure? If the charges increased, such lands as these must go out of cultivation; and they would see whole parishes turned into single sheep farms which he dared say would be as profitable to the landlord as when they were let out in the ordinary way. By dividing the rate between the landlord and tenant the cost of collection would be increased. The principle, however, might be applied in the case of permanent erections, such as school-houses; and no doubt Sir Massey Lopes was ready to take this matter into consideration at the proper time. The amendment, indeed did not really deal with the question at issue. Sir Massey Lopes suggested that the whole of the cost of the administration of justice, and half of that of the lunatics and the police, should be charged to the Consolidated Fund. This was decidedly a moderate claim, for he held that they ought to include also in that arrangement the cost of dealing with sanitary matters. The real question at issue now was—the justice of their case being admitted—whether there should be an allowance from the Consolidated Fund or an extension of the area of rating. He inclined to the latter view, and would suggest that the house, horse, and carriage taxes might be given over to the local authorities. This would secure local government, which meant economy. He had not prepared

any resolution himself, but would move one written by their chairman. "That the area from which Local Taxation emanates is much too restricted, and that consequently it bears with undue pressure on one class of the community."

Mr. B. SNELL held that if they took up the question of area they would get upon rather dangerous ground. The great point, so far as it had been carried in Parliament, was the liability of real property to certain charges which he held should be borne elsewhere. He had great misgivings of what might follow if they attempted to go beyond real property.

Mr. PERRY was not anxious to press the resolution which they had before them, and should be happy to join in another after the discussion was over.

Mr. W. SNELL ventured to propose a resolution which he hoped would be acceptable: "That the present exemption from rates of certain descriptions of real property is unjust, and also that the general property of the country of every kind should contribute to all taxes levied in the shape of local rates, but which are expended for imperial purposes; and having regard to the large majority in the House of Commons recently by which this principle was affirmed, this Chamber hopes there will be no delay in giving redress." He coincided with the view of Mr. B. Snell that it would be very unwise to attempt to carry the area of rating beyond real property. What the agriculturists complained of was the new taxes. They had either inherited or bought or rented property liable to the ordinary charges of the maintenance of the highways and the relief of the poor, and to that they did not object. But what they did object to was that new burdens should be cast upon them only, and not spread over other descriptions of property. They felt this specially in regard to the education rate. In the parish in which he lived there were many small farmers and market gardeners, who were paying a great deal more towards the education rate than persons living in mansions and villas with £500 or £1,000 a year, and those burdens were not anticipated when these farmers and gardeners first took the land which they rented. Another point which never should be overlooked was the fact that there was a good deal of real property which was not rated, and the rating of which would be a real gain to the taxpayer. If something of that sort was not done—merely taking from the Consolidated Fund was only re-arranging the burdens—the money had to come out of the taxpayers' pockets just the same.

Mr. PRATT seconded the motion, observing that real property was entitled also to some consideration from the fact that its privileges—in the shape of protective duties—had been swept away. He hoped no time would be lost in pushing the matter forward.

Mr. SPEAR greatly regretted that there was such a small attendance out of 600 members, and blamed the conduct of the Opposition in Parliament as the real cause why the Government had been unable to carry out their desire of re-adjusting local burdens. There could, however, be no real relief unless the area of rating was extended, especially to woods and plantations; and he would move, as an amendment, "It is the opinion of this meeting that the rating of woods, plantations, and common lands, and of all hereditaments, should take precedence of the distribution of local rates." This was not seconded.

Mr. ROSEVEARE thought the different resolutions might very well be combined. The question, however, was so broad that no one chamber could hope to take it up at present in all its bearings. Mines ought also to be rated, though in regard to them it was rather difficult to say what was real property and what was not. He should be glad if a meeting could be called at Liskeard to consider whether, under the present law, buildings, engines, and tramways on mines could not be rated. The question of the maintenance of the highways was likewise a most important one.

The CHAIRMAN remarked that there was also a good deal of Government property that escaped taxation.

Mr. SOLTU-SYMONS did not see very much difference between the motion of Sir Massey Lopes and the amendment of

Sir Thomas Acland, except that the latter went on to suggest that the rates should be divided between the owner and the occupier. Last year Mr. Goschen approved of the principle of the motion by proposing to hand over £1,200,000 house tax; and he could not at all understand why the Government had since courted defeat. He did not see, too, why Mr. Perry did not consider the division of rates between the landlord and tenant a benefit for the latter. For himself, he thought that of all new rates which were imposed after a tenant had taken a farm the landlord should pay two-thirds. He agreed with the principle enunciated by Sir Massey Lopes, but at the same time he could not shut his eyes to the fact that land was yearly rising in value. As to education, bearing in mind the difficulties which many of the tenant-farmers had in procuring education for their children, he held that the primary schools should be such as would be fitted for them likewise. Another point which required attention was the management of the rates. Now-a-days so many things were put together under the head of the poor-rates that no one could tell what the rates were for, or what became of the money. Better local management would lead to economy; and he held that county financial boards would greatly assist in producing that result. They all felt that the incidence of local taxation was too limited; and after the way in which the resolution of Sir Massey Lopes had been carried, he hoped the matter would be dealt with by the Government without delay.

Mr. DINGLE pointed out the grievance under which his parish laboured, in consequence of the existence there of a large mining centre which did not contribute to the rates. Thus they had to increase the poor-rates largely; to make a much greater expenditure on the highways; and now they were called upon by a Government inspector to educate the miners' children. This would cost them, at least, 1s. in the £1, which would be equal to an income-tax of 2s. Well, they had told the inspector that they should do nothing, that they were liable to very heavy burdens on account of the mines, for which they received no consideration; and that the Government

might do what it pleased. He did not at all value the proposal to divide the rates between the landlord and tenant, which he looked on as a proposition intended for the purposes of division. The rating question would be the test at the next county elections; and a good many members would be left out in the cold if they did not change their ways.

Mr. N. STEPHENS thought the proposal to divide new rates between landlord and tenant only equitable, and likely to tend to economy. He quite endorsed in other views the resolution of Mr. Snell. Tenant-farmers and yeoman did not wish to monopolise county financial boards. They only wanted to weed out some people who had no business there. If they wanted grievances to be redressed they must ask the Legislature to do it.

Mr. PERRY, in reply, having withdrawn his motion in favour of Mr. Snell's, denied that the Conservative party had offered any opposition to Mr. Stansfeld's Bill. He cautioned his friends against in any way admitting the principle of new rates. What they said was that they had too much already. The difference between throwing charges on the Consolidated Fund, and between having taxes handed over as he suggested, was that the adoption of the latter course would secure local control; and with that control economy.

Mr. SNELL'S motion was then carried.

The CHAIRMAN then moved, Mr. W. SNELL, jun., seconded, and it was supported by Mr. Soltau-Symons and Mr. Pratt, and carried unanimously, "That this Chamber begs to tender to Sir Massey Lopes, one of the members for South Devon, their cordial and unanimous vote of thanks for the able, earnest, and lucid manner in which he introduced the question of local taxation in the House of Commons on the 16th of April last; and that this Chamber sincerely congratulates him on his having obtained so signal a recognition of the undue pressure to which real property is now subjected, and feels assured he will persevere in that good cause which has so justly secured him their confidence and esteem."

BRAMPTON FARMERS' CLUB.

STATUTE FAIRS.

At a meeting for the purpose of hearing a paper on the "Hiring of Farm Servants, and the time of hiring them," Mr. G. Coulthard in the chair,

The Rev. W. DACRE said, it cannot be denied that in many of the southern counties the agricultural labourer has much reason to be discontented with the way in which his labour is remunerated, although the case has been greatly exaggerated—and it is to be hoped that now that the case has been fully brought before the eyes of the public, there will be a readjustment of the relations between employers and employed, and that the labourer will receive a more adequate remuneration for his services. He considered the condition of the labourer in the north, however, as different from this. Here, for the most part, our farm-servants are well paid, well fed, and well educated, and as the result they are more independent, do more work, and are more intelligent than the same class in the south. This brought him more immediately to the subject before the meeting—namely, the statute hirings. Are they desirable or are they objectionable? And could any improvement be made as to the time of hiring? In his opinion they were not objectionable, or at least they were not so objectionable as any other method that had been proposed; in fact, they were desirable rather than otherwise. He objected to the manner in which this question had always been looked at from the employers' side of the question alone. Of the arguments adduced against the custom, the principal one was on the score of morality. He admitted there was a good deal of drinking at hirings; but not more in proportion than there was at an agricultural show or any other gathering. With respect to dancing in public-houses he did not see any difference in one class enjoying this amusement in the room of the public-house, and another class in the hall of the County Hotel. To those who are advocates for the abolition of public hirings, he would ask in what manner would you propose to compensate the servants for the loss of their term day and the public hiring. The half-yearly hiring gave servants a regular holiday of several days in which they could meet their

friends and relatives, either at their homes or the public market, and who that had ever witnessed the cordial greetings with which friend meets friend would wish that a source of so much pure pleasure should be done away with? Another objection was that it would be far better for masters to engage servants with characters at register offices, than a servant in a public market without a character. He could say for himself that he never engaged to hire them at a public hiring without a character, and although he had met with excellent servants at register offices, he had also met with the reverse. As to the times of the hirings, the two main hirings are Whitsuntide and Martinmas, with quarterly hirings at Candlemas and Lammas. Respecting these two latter hiring days, everyone will admit that Candlemas is a most convenient hiring day, as being the term for entering on many farms, and when consequently many fresh servants are required. All therefore will be agreed that if any change in the four quarterly hiring days were to be made the Candlemas hiring should be unaltered, but should remain one of the four days—in other words that Carlisle hiring, which regulates the other hirings of the district, should be on the first Saturday in February. Having fixed that as one of the hiring days it seems it would be a very simple thing to alter the other hiring days at Carlisle to the first Saturdays in May, August, and November. This would make all the four quarters equal in length, and would not materially alter any of the present terms, except that of Whitsuntide, for which the first week in May would be substituted. Many think that it would be advisable to make February and August the principal hiring days, but in this the present arrangement of the half-year is the better, and especially for two reasons—the one, that May and November are seasons when summer and winter clothing are changed, and therefore suit the farm-servants best, as well as being the general rent time for cottage property; the second reason is that many, especially of the smaller farmers, can manage to do with a servant or two less during the winter quarter, from Martinmas to Candlemas, which they are enabled

to do now by hiring servants from Whitsuntide to Martinmas, and then waiting till Candlemas before they hire again for the ensuing quarter; whereas if the principal terms were to be Candlemas and Lammas, the farmer would find it difficult at Lammas to hire servants only for the quarter. As it is under the present system the farmer who hires a servant for the spring quarter generally finds that quarter to be nearer four months than three, and the following quarter proportionately shorter. There may be difficulties attending the altering the days of the hirings, or there may be objections to the above slight alteration, but the farmers have only to will it, and the change would have to take place, and neither the servants or masters could make any reasonable objection.

A long discussion ensued as to the desirability of altering the dates of the terms for the hiring of servants, in which Mr. Bell, Townfoot, Mr. Birkett, Mr. W. Armstrong, Rev. W. C. Miller, Mr. J. Bell, the Chairman, and the Secretary took part.

Mr. GRAHAM read the following communication from the Whitehaven Club: "Resolved that a petition from the Club be presented to the Justices in Quarter Sessions assembled, desiring the terms for hiring servants to be changed from Whitsuntide and Martinmas to the first week in June and the first week in December, and that a copy of the resolution be sent to the other clubs in the county, inviting them to discuss the subject, and asking their co-operation in the matter."

Mr. BIRKETT proposed that the discussion should be adjourned to that day month.

The Rev. W. DACRE thought they should not separate without giving some expression of their opinion, and moved, seconded by Mr. Armstrong, "That this Club make an expression of their opinion, to the effect that if any change is made in the terms for engaging servants, the Whitsuntide term should be altered to the first Saturday in May, and the Martinmas term first Saturday in November."

Mr. T. BELL proposed an amendment, which was seconded by Mr. Smith, "That the terms be Candlemas and Lammas—that is, the first Saturday in February and the first in August."

After some further discussion, as to the propriety of putting the two resolutions to the meeting, it was ultimately decided to withdraw them until the next meeting of the Club; and the subject accordingly stands adjourned until the first Wednesday in June.

THE LANCASHIRE FARMERS' CLUB.

At a meeting of landowners, farmers, agricultural labourers, and others held in the Assembly Room of the Lion Hotel, Warrington, to consider the desirability of establishing a Farmers' Club or Chamber of Agriculture for the district of South Lancashire and North Cheshire. Mr. G. C. Hale, Knowsley, in the chair.

Mr. JOHN WHITE (Warrington) said the meeting was the result of steps taken on a resolution passed at a meeting of the Manchester and Liverpool Agricultural Association, called to consider the present state of the labour question in this district. Among the letters he had received on the subject, one from Lord Egerton of Tatton, who was unable to attend, stated that though to the formation of an association such as that which Mr. Neild now suggested, he did not attach such importance as that gentleman appeared to do, he should in this, as in all other matters, be guided by the opinions of his neighbours interested in agriculture. He would move the following resolution: "That this meeting is of opinion that the present unsettled condition of agricultural affairs calls for the united co-operation of landowners, farmers, and all other persons connected with agricultural pursuits, and that an association should now be formed, to be called 'The South Lancashire Farmers' Club,' to be composed of all persons interested in the cultivation of the land." He felt confident that if the association which was now proposed was formed on a sound basis, it must be productive of considerable good. He believed great care would be required to prevent it becoming like many other associations, more productive of harm than good. He fancied many had come there that day under the impression that the consideration of the present state of the labour question would be the principal object of such a chamber as he now proposed; but for his part he was of opinion that this subject was one which could only be dealt with by such an

association with great difficulty, and that it was one of those questions which, if left to time, would right itself.

Mr. H. NELL (Worsley) said they had no party objects to serve in establishing a Farmers' Club. Agriculture in England had to contend with unlimited licence, and free-trade principles all over the world. It had many burdens to bear. It was not fairly weighed in its competition with free-trade and the world. In order that agriculture might attain its full development in this country, there ought to be a well-adjusted Tenant-Right. Money would not fructify in the soil of England until farmers had abundant confidence that they would reap the results of their labour and skill. In Lancashire they were especially favoured with some most enlightened landlords and landlords' representatives; but, on the other hand, he believed the proceedings of that day were watched with a degree of jealousy by certain gentlemen, and he wished that these proceedings, and all the future proceedings of any Club that might be formed, would have the result of increasing the confidence, kind feeling, and co-operation between every agricultural interest in the county.

The resolution was unanimously adopted.

Mr. T. RIGBY (Over) moved: "That the objects of the society shall be the discussion of practical subjects connected with agriculture, the consideration of any local customs, tolls, market charges, railway freights, &c., which bear adversely on the transit or sale of agricultural produce; the constitution of a court of appeal or arbitration for the consideration and settlement, when desired, of any matters in dispute between landlord and tenant, or between tenant and labourers; to discuss any legislative measures affecting agriculture, and to take such action in connection with the Chamber of Agriculture of London, or as an independent Chamber, as may be necessary for the benefit of owners and occupiers of land." These four distinct objects of the Club mentioned in his resolution were all important. The value of the second, which referred to the consideration of tolls, market charges, railway freights, &c., received practical illustration recently in Warrington, when meetings were repeatedly held to complain of the injustice of the railway companies making a very heavy charge for the transit of milk. Railway companies were proverbially hard to move, but if any power could move them it was a combination of men making reasonable representations to them on behalf of what they conceived to be just and right. It was not contemplated that the Club should deal with the question of the agricultural labourers' condition, as it might be presented to them in combinations. Personally, he should deprecate any union of farmers to meet the action of unions of working men. If farm labourers, to live comfortably and do the work required of them, must be in a better position to obtain the necessaries of life, it was for the farmers individually to meet this consideration, and to try to arrange in a liberal and reasonable spirit with their men. As a court of appeal, the Club would be useful in settling many disputes about the customs of districts, which were the subject at present of frequent litigation, and caused much expense. On this and on other subjects, an association of practical men were more likely to decide fairly, and their arbitration would be more acceptable than the remedies which could only at present be recommended.

Mr. R. WHALLEY (Bold) seconded the resolution, which was unanimously adopted.

Mr. H. WYATT (Croxteth) moved that a provisional committee be appointed for the purpose of drawing up rules and arranging all other details in connection with the establishment of the association.

The CHAIRMAN, in seconding this resolution, said they might congratulate themselves on the large meeting and the proceedings which had taken place. Such a Club as that proposed could not fail to be of great use to the district, while it would cement the union which, as far as his experience went, already existed among the landowners, tenants, and labourers of the county. If it could do anything towards bringing about a better system of Tenant-Right than that which now existed in this district it would be a great benefit to the county.

A provisional committee was then formed, and the meeting adjourned for one month, when the constitution for the Club, suggested by the committee, together with any suggestions from district Clubs which may be formed, will be taken into consideration, and members enrolled.

"A MODEL AGREEMENT."

THE MAIDSTONE FARMERS' CLUB.

At a meeting held on Thursday, April 25, Mr. Thomas Bridgland, the President, in the chair, there was a very full attendance of members.

Mr. HENRY CORBET, of the London Farmers' Club, read the following paper:—

A MODEL AGREEMENT.—I do not believe in a Model Agreement. That is to say, I do not believe that any man or any body of men can sit down and frame an agreement which should be accepted by all the rest of the world. The different circumstances of soil practice and custom, the several systems upon which either landlords or tenants hold possession of their property, the very social conditions of the contracting parties, must all tend to defy the application of any hard line and rule, however well intended, or however nicely adjusted. At the same time nothing would promise to be more advantageous than the consideration of such individual essentials as would go to constitute a Model Agreement. In no way has the advance of agriculture during the last quarter-of-a-century or so been more promoted than by the habit of "talking about" hiring and letting land. We may perhaps have not done much in this direction by Act of Parliament—the farmer never has done much by Act of Parliament—but by other means we have done something to expand the minds and quicken, as it were, the business-like capabilities of landowners, land-occupiers, and last, though certainly not least, of land-agents. Noticeably enough, amongst the most useful contrivances towards such an end has been the employment of a certain species of martyrdom. Ever and anon for a few years past there has been found some patriotic gentleman ready to sacrifice himself for the public good. With this aim he studies and busies himself over the production of a Liberal Lease or a Model Agreement; and having called a meeting, heroically presents himself as a target for everybody to fire at. The world probably never knew there were such obsolete rusty conditions in existence until they saw these paraded in a Model Agreement; the tenants were often in happy ignorance of how they were actually or might be hampered, until they heard "our" lease read out in the market-place, and no man ever came to really see how little trust he could put in his fellow man until he began to arrange for the letting or the taking of a five-hundred acres' farm. It may be serviceable to show how such small mice have been born of such great labours, and how these elaborate patterns have never come into the fashion. Some ten years or so since the Suffolk Agricultural Society laid very happily, as it seems to me, the lines upon which any improved or modern agreement should be built. The committee offered a prize for "the best and shortest form of lease adapted for the county of Suffolk, giving the greatest liberty to the tenant, consistent with the interest of the landlord." Nothing could, at least at that time, have been more prettily put, and nothing could have been more impotent than the result—a very small mouse indeed. The tenant's *liberty*, as interpreted by the prize lease, compelled him "to consume and convert into good manure, with cattle or sheep, all the hay, stover straw, chaff, colder, haulm, fodder, cloves, tares, artificial grasses, cabbages, and green crops, except such straw as shall be required for the thatching of the buildings; and all turnips and root crops." He had *liberty* not to remove earth or mould from the banks of fences within five feet of the

spring or quick. He had *liberty* to preserve the game for the sole use of the landlord, his friends, and his servants; as even in a lease adapted for the game-ridden county of Suffolk not a word was inserted in protection of the tenant against any excessive abuse of this kind. He had *liberty* to allow the landlord to plant as often as he chose in all corners and hedge-rows and he had *liberty* to pay a fifty pounds' penalty if he did not duly protect these young trees; while he had the further liberty to do nearly all the repairs, and to keep in proper condition "all glass and lead of windows, the going gears or pumps and wells; all gates, stiles, posts, pales, rails, fences, ditches, water-courses, channels, under-gate ways, racks, cribs, mangers, shutters, locks, bars, bolts, hooks, and hinges;" or, as there should have been added in this best and shortest form, of prize lease, cribbage-boards, hurdy-gurdies, and slate pencils. The Suffolk Model Lease being pretty generally pronounced about half-a-century or so behind the age, did not attract much attention, but fell, as it deserved to do, still-born, and is by this time probably forgotten, even in the land of its nativity. Another offer, however, during the same year created a deal more sensation. This was a premium of £50, given by Lord Lichfield, for the best form of farm agreement, an offer which brought an immense amount of competition, while a tenant-farmer, Mr. May, was eventually declared to be the successful candidate. So far this was sufficiently satisfactory; but instead of a tenant's own notion of an agreement being at once published and submitted to the criticism of his fellows, a committee of land-agents undertook to "touch up" and tone down the several clauses, and of course some very wordy warfare was the consequence. The paper when at last put into circulation was declared to be far more of a landlord's or a land-agent's production than that of a tenant, and its leaning pretty palpably all one way. The saving clauses were those which at the end of a term ensured the tenant payment for unexhausted outlay in the shape of purchased manures, bones, lime marling, and other fertilizers of a lasting character, *pro rata*, as well as in proportion for the corn, cake, or linseed consumed. On the other hand, the tenant was bound down "not to have more than two-fifths of the arable land in wheat, and at the conclusion of his tenancy not more than one-fourth in wheat, nor more than three-fifths in white straw crops in any one year"—not to sell any hay, straw, mangolds, or turnips off the farm, unless by special permission of the landlord—to properly manure all grass land mown for hay—not to kill any of the rabbits from the 1st of April to the 1st of November—to give over all right to the game to the landlord, and not to claim any compensation for damage done by game "unless when let to a third party." Of course game never should be let to a third party, though the insertion of such a condition was evidently well-considered here, as since Lord Lichfield's prize agreement was propounded a leading landlord of these parts has, it is said, adopted the practice of letting the game over the heads of the tenants without ever consulting them, beyond offering the alternative of grinning and bearing it or of throwing up their occupations. This Model Agreement was never accepted as such, nor, if I remember aright, did one subsequently prepared by Lord Lichfield himself fare much better; but I see that his lordship and the Staffordshire committee are now going to work again on another agree-

ment, as are Lord Leicester and the Norfolk farmers, and it is to be hoped that practice may make perfect. Still it is only fair to say that Lord Lichfield's agreement was in certain quarters considered "as complete as any we have seen," though this perhaps was not saying much; and another form, "embodying the best part" of this, positively received a premium from the Royal Agricultural Society of England. Here are some of these precious prize clauses: "The landlord shall reserve all rights to the game, hares, fish, and rabbits, and through himself friends and servants to preserve the same; the tenant having liberty to destroy the rabbits at any time by ferretting or digging, but no dog to be used between the first of April and the first of September.—The tenant not to plant two crops of wheat or more than two white crops in succession, nor to have more than three-fifths of arable land under corn or seed crops of any kind in any one year.—To consume upon the farm all the fodder, hay, straw, haulm and roots of every description, except so many tons of potatoes, so many tons of hay, and so many tons of straw, which may be sold in any year on condition that the full money in value is returned to the farm in oilcake or artificial manure; notice in writing to be given to the landlord of intention to make every such sale.—To prevent all thistles, nettles and docks from seeding on any part of the said farm, as also all weeds in the hedges, ditches, and waste lands"—or, as the prize essayist might have run on, to keep his piano in tune, his baby from crying in church, and his big bull from breaking out of bounds. Only imagine a Royal Society's Prize Agreement of the year 1868 enacting that a farmer shall keep all his dogs chained up—for to this it comes—for five or six months in the year lest they should give chase to that sacred animal the rabbit! and that the man shall not sell a sack of potatoes nor a truss of hay without giving due notice in writing of his being about to enter upon so stupendous a transaction!—and then dutifully handing in his bills, all of course properly receipted, to show that he has brought back the equivalent! Such good works as these could but bring good fruit, and in due course followed the Welsh or Carmarthen Agreement, in introducing which its author precisely stated that "the cardinal points to observe were that the tenant should have full liberty to farm according to his own ideas"—that "the term of every tenancy should be embodied in as plain and brief a manner as is consistent with perfect clearness—and that this should not read a homily to tenants on the way they should manage their farms." Accordingly, by way of giving a man full liberty to farm after his own fancy, we have the strictest covenants introduced; enacting that he shall consume on the farm all the green crops, hay, straw, muck and manure; that he shall not breast-plough, pare or burn without special permission—that he shall not have in tillage in any one year more than so many acres—that he shall not carry away from off the premises any hay, straw, corn in straw, green crops, muck or manure—and that he shall on no account be allowed to kill a rabbit with a gun—so carefully still are the interests of this sacred animal looked after in a Model Agreement. Unfortunately this model document was left to a legal friend to prepare, and as a consequence it abounded in all the prolix abuses of a lawyer's office; as indeed one kindly critic said, "it was much too long, and likely to lead to law;" about the very hardest thing he could have said, and I need scarcely add that this remarkable specimen of liberty, simplicity, and brevity did not "go down" in South Wales. Nevertheless, strange as it may sound, this attempt seems to have led to the production of another model Welsh agreement of a still more extraordinary character. The author here, another land agent, stated in the outset that "the chief thing wanted in many districts to secure the rapid advancement of agricultural prosperity was a more liberal construction of agreement," and he straightway publishes a paper, overflowing with covenants and bristling with penalties, whereby the tenant is instructed, or more directly ordered how he shall set about the simplest acts of husbandry. He is not to mow his grass lands more than once a year; he is to cut down before seeding all the weeds; he is to apply regularly a sufficient quantity of lime; and he is to carry all the weeds to a convenient place, where they may be rotted and mixed with the lime; he must not sell a load of hay, straw, or manure; he must preserve all the game and the rabbits; and if he wishes to leave home for a month he must obtain his landlord's permission before he starts! To their credit, be it said, the Welsh farmers have not been very ready

to take such a thing as this for a pattern. In the latest edition which has been published, that is, in Lord Leicester's lease, the tenant is bound down "to deliver so many waggons-loads of good wheat-straw at the stables"—"to do so many days' work of four horses for the landlord"—"to cherish, nail up, prune, and preserve the fruit trees"—and "to deliver one good fat turkey at the House in the month of December in every year." I have collated thus much to show how much some men have still to learn when they engage upon the construction of a model, or, I should prefer to say, a modern agreement. Many of the mistakes I have cited are but the carefully hoarded precepts of a bye-gone age, as the attempt has been continually made to associate agricultural advancement with obsolete practices. Look, for instance, to the vulgar error so pertinaciously repeated even in the *Journal* of the Royal Agricultural Society, which stays a man from selling a shilling's worth of hay, straw, or roots, excepting under certain specified conditions. Half a century or so since, when guano, phosphates, coprolites, and the hundreds of other artificial manures and feeding stuffs had never been heard of, there might have been some sense in binding a man down to consume all his hay and straw, or to bring back in proportion as much farm-yard manure for every load he sent off. But such arguments apply no longer, such covenants are alike to the disadvantage of landlord and tenant. The cake or manure bill of a good farmer in these days would serve to lay the ghost of his own father a deal quicker than any attempt to exorcise him by priest or candle. *Tempora mutantur*, and our leases and agreements must change with the times. The more modern form, instead of stipulating as to what shall and what shall not go to market, should take care that permission be given the tenant to sell anything he likes but his vote and interest and his wife and family. Again, let us avoid that old musty provision, so religiously reproduced in the Royal Agricultural Society's *Journal*—that a man shall not take so many crops of this or that in succession," but shall "cultivate and manage the said farm and lands in a good and husband-like manner." Why, of course he will, if he study his own interest, and the best plan will be to let him cultivate "the said farm" on any system he finds to be the most profitable, without dictating as to when he shall do this, and when he must do that, as if he were a school-boy, instead of a man who should know his own business. When Mr. Mechi and Mr. Prout, and Alderman Cute and the *Times'* Commissioners tells us of the wonders which can be achieved by the improved cultivation of the soil, do these great authorities ever contemplate a man going to work with his hands tied? *Farm as you please and sell what you like* should be the main condition of the modern agreement, due provision, of course, being made for bringing the land back into something of the customary rotation by the end of a term. But I can fancy some old stagers and cautious men of business shaking their heads and intimating with a half sigh that we are talking too fast here. More than four years since, indeed, when I ventured to broach such opinions as these, I was met by Mr. C. G. Grey, of Dilston, the well-known land-agent, who said, at a meeting of the Hexham Farmers' Club, in answer to my objections against restrictions advocated by himself, that you would not find many who would agree with such dicta as—"This is the rent, there is the farm, cultivate it as you like." These were not quite my words, but they are near enough; and in a week or two from this time, at another meeting in the North, of the Morayshire Farmers' Club, Mr. Geddes, who read a paper, said, "Let it not be supposed that laying down in a lease any number of complicated clauses will preserve the condition of the farm with a bad tenant. He will slide through them to its destruction, and yet keep within the law." At the meeting Mr. Yool said, "In the first place, every proprietor should find a good tenant, and by all means let him crop the farm any way he likes during the greater part of the lease, although during the last five or six years the landlord should reserve the right of having it placed in the proper system;" and Mr. Cooper said, "It was really the interests of the proprietors to grant liberty to the tenants to farm as suits the land and times." At the Kelso Farmers' Club, at just about the same time, Mr. Robertson said: "It would be a mutual benefit to both landlord and tenant to allow the tenant to farm his land for the first fourteen years as he liked, leaving it at the end of his lease in whatever shift, was named in the conditions of let;" while Mr. Usher asked

"Why should leases in this age of freedom and of high farming be hampered with any restrictions about cross-cropping?" I was thus enabled to answer Mr. Grey out of his own latitudes, where I find the "many" rather with than against me in advocating freedom of action in modern farming. This, however, happened some years since and some distance off, so that it may be as well to trace opinion and practice down a little nearer to our own doors and times. What, then, is the chief clause in the famous Holkham Lease, as issued during this year of grace 1872? I will read it to you. "6. The tenant is to cultivate and manage the farm during the first sixteen years of the term according to his own judgment, and to have full power during such time to dispose of all or any portion of the produce of the farm by sale or otherwise. During the last four years the tenant shall bring the arable lands into the four-course system of husbandry practised in Norfolk." Here, in a word, is all I asked for long ago—*Farm as you please and sell what you like.* But I must go farther still, and try land-agent by land-agent, as it is but a few evenings since I heard Mr. Clutton, one of our most extensive land-agents, declare that his favourite form of lease was to let the tenant farm very much as he pleased until within the last two or three years of his term. All this makes the Royal Society's prize form of agreement sadly out of date. But Mr. Clutton said more than this: with all his long experience in different parts of the country, he stated that short holdings with Tenant-Right or Lincolnshire compensation covenants were more in favour with the farmers than leases for long terms; "all they required was liberty of management and fair Tenant-Right." Of course no Model Agreement, or model lease either, can be now regarded as complete without these compensation clauses, allowing proportionate payment to the tenant for improvements he has entered on, but for which he has not had time to reap the full return. Here is a very weak place in the Holkham Lease, where little or no provision of the kind is made, pointed as this omission is by the now notorious Fenton Barns case. Had there been compensation clauses attached to his nineteen years' lease Mr. Hope could have had really no cause to complain. It is true he was farming highly and well, that he was an old tenant, enjoyed a good character, and so on; but if a man went to maintain his possession on these pleas the rights of property would no question be invaded. Every landlord has the power to change his tenants if he so please, and let it be ever borne in mind that, for one such disturbance brought about by bad or slovenly farming, there are fifty which might be traced to differences over Party Politics or Game Abuses. Hence the greater reason to be protected, and I care not whether you hold under a long lease or a yearly agreement, to make the most use of your time and the land we must have a general recognition of the Tenant-Right Custom. And here it may be very necessary to define between good and bad custom, between that which should be advocated and that which should be deprecated. Many years back, at the request of Mr. Philip Pusey, I undertook to make a digest of the evidence taken on Agricultural Customs by a Committee of the House of Commons, and in an introduction which he wrote to a second edition of my work, Mr. Pusey penned a paragraph which comes especially pertinent to a meeting of the Maidstone Farmers' Club. "The Kentish Tenant-Right is based not on acts of improvement, but of husbandry. It is evidently founded on the old system of the naked fallow—that is, of leaving the land without crop for a whole year; for which preparation it was just that the incoming tenant should pay, as well as for dung put into the fallow. But this system was extended by reckoning further back, and paying for what are called 'half-dressings.' The evidence thus becomes doubtful, and the charge onerous; so that landlords are redeeming their land from some of these claims by payments made to their tenants. Of course this Tenant-Right, where it exists, cannot be altered but by mutual agreement of landlord and tenant. Neither can it, however, be recommended for introduction elsewhere; it is only mentioned here because its common name has cast a prejudice over the other more modern custom, which deals with substantial improvements." Some of your customs are, you see here, the rather to be avoided than imitated, and instead of payments for acts of husbandry that which we want is payment for acts of improvement, of which the outgoing tenant has not had an opportunity of reaping the due benefit. These acts are comprehended in chalking, marling, and the

beneficial use of lime, bones, guano, oilcake, and ashes; as I hold that the more expensive or permanent works, such as building and drainage, should only be engaged upon by special agreement, as, properly classified, they are not tenants' but landlords' duties. When I accepted the invitation with which you thought fit to honour me, I had some notion of putting a second title to this paper, and writing it as a LESSON TO LAND-AGENTS, and I should still wish to dwell a little on this branch of the subject. In the outset, then, I must put it as a very wholesome ethic, that no lawyer should be suffered to undertake the office of a land steward or agent. His own interests, or at any rate habits, are commonly opposed to agricultural advancement, as no doubt half the musty, out-of-date, unintelligible, technical forms of agreement which tenants are called upon to sign come straight from the hands of the copying clerk, without perhaps the alteration of a word or line in a generation. The more worly these documents can be made, more proportionately to the profit of the office; the more dubious and impractical in their tenour, the more likely sooner or later to lead to "business." Even, further, no man is so timid or so dangerous as an ignorant man. The less he knows the less ready will he be to commit himself by doing anything out of the ordinary routine. At best the lawyer-agent is but a dead weight and a drag-chain. In the Holkham Lease, after giving in the outset the tenant full liberty of action, power is subsequently reserved to the landlord of stepping in during the term and ordering the cultivation to be at once brought back to the system of the district. This is no doubt an immense power for any one to wield, but in the hands of an inefficient agent it might often become an instrument of torture. If the tenant had voted *blue* instead of *yellow*, if his son rode hunting in a red coat instead of a black one, if the shepherd's dog had been seen by the keeper to turn a leveret, if "the Missis" had gone to chapel instead of to church, down of course comes the intimation that "in the interests of my employer I must require you to revert to the four-course system." I do not for a moment intend to make any application here to Lord Leicester or his agent, but I must repeat that in the hands of incompetent people this power to recall would be a very dangerous instrument, and I should prefer to see the next issue of a liberal lease free from such a condition. In any case, no such reversionary power should be exercised, save on arbitration by two independent valuers. Of course the plea is that the owner's interests must be guarded, as indeed in most of these agreements the very kindest feeling is evinced for the landlord, and little or none for the tenant. With, however, an agent who knows what he is about, the landlord's interests should be tolerably well insured at starting—that is in the choice of a tenant. Character here, as in every other walk of life, goes a great way, and whenever in these days there is a firm to let there are always plenty of people to pick from. Again, if things come to the worst, the landlord has first run on what there is left; and further, although a multitude of these protection covenants will never make a bad farmer a good one, they will often stay a good man from doing his best. Mr. C. R. Grey, of Dilston, whose name I have already given you, as himself one of the most eminent of our land agents, says "nothing destroys an agent's influence or a landlord's popularity more than treating every application from tenants as if it were an attempt to over-reach the agent and impose on the landlord"—a maxim which might be framed and glazed forthwith. Again: "Retired soldiers and sailors do not generally make good agents, though they have some qualities which are useful, such as punctuality and carefulness. Retired butlers and house stewards may be estimable men, but they are not such as should be set over tenant-farmers. Poor relations, for whom some provision is desirable, would generally cost an owner less if he were to make them an allowance to live at Bath or Cheltenham. Mercantile men are too apt to look at everything in a purely mercantile spirit, not seeing distant or contingent advantages. Farmers who have failed in farming have the disadvantage of undertaking to manage another man's affairs when they could not manage their own: nevertheless when their failure has been owing to want of capital or unavoidable calamity, and when they are educated and upright men, they frequently make good agents. Head clerks promoted from the office are very apt to find themselves in a position for which they are unfit, having been too much bound to routine and detail to take large views of

management. They are apt to be too much the servants of the land-owner, and not enough mediators between him and the tenants. Lawyers, attorneys, and writers, though frequently entrusted with the management of estates, are about the most disqualified. Their education, bent of mind, legal way of reasoning and treating all questions, are a positive bar to success in the management of estates, and I consider it an absolute misfortune to the country that so many estates are under their care. From their special training they look narrowly into legal obligations and the rights of property, and from want of experience in country affairs they are incapable of judging of the propriety of modifying obligations which may be obsolete or inexpedient. Landowners in Scotland and Ireland, I believe, more than in England, commit the mistake of making such appointments." I do not always agree with Mr. Grey, but how admirable all this is! and bear in mind I am quoting a land-agent speaking of land-agents. Of course these are the people, the half-pay officers, the poor relations, the old butlers, the attorneys and writers who insist upon upholding "our usual form of agreement" in all its hideous originality, too ignorant, too idle, or too busy to encourage or even sanction a better state of things. I should like to institute a Commission of Inquiry, armed with due powers to examine into all the leases and agreements under which land is farmed in this country. What strange relics of antiquity and feudalism we should still find to prevail! from the famous cock turkey covenant to keeping a bird and a dog. I found these very stipulations the other day in an old form of agreement on Lord Derby's estates: "to keep a dog and cock when required. To grind all such corn as the occupier of the premises shall use ground thereon at the mill of the said Earl and pay the accustomed toll for grinding the same." Now, let it be clearly understood that such covenants as these shall no longer be suffered to stand in any agreement suitable for the times we live in. I should imagine that there is not a tenant on the Holkham estates but who would be too glad to "deliver one good fat turkey in the month of December of every year;" but how much more gratefully such tribute would come were it not directly ordered in the lease. Besides, the companion clause is clearly wanting, whereby, to make the arrangement fair and square, the landlord by his agent or servants shall undertake to deliver at the Grange so many brace of birds during the month of September, so many brace of pheasants during the month of October, with from time to time so many good fat hares. I should hope there are but few farmers who would object to walk a fox-hound puppy, or who would not take a pride in showing him for the cup; but surely this scarcely need be made the subject of a covenant whereby executors, administrators, and assigns shall be bound. As regards keeping a cock, that mysterious bird no doubt was a game-cock, for the Lord Derby of those days, *proh pudor!* fought mighty mains, with Potter feeder, against the Gentlemen of Cheshire or the Gentlemen of Lancashire. Then, if a man can be entrusted to farm five hundred acres of land he may be left to trim his gooseberry bushes, nail up his vines and oil his locks, without looking to his agreement for instructions as to how he shall duly perform such fiddling work. Some of these old covenants are open to still graver objections, as a man must fold his sheep at a certain specified time, wet or dry—must not grow potatoes nor sow flax—must not keep over an average head of stock on the farm—must not hold any other farm—must pay heavy penalties if he crop contrary to the covenant—must fetch and carry coal, corn, and straw for the Great House whenever ordered to do so—must have his pigs well ringed—must twice hoe all his turnips, peas, and beans—not mow the grass lands, excepting the meadows, two years in succession, nor tread these with heavy cattle in wet seasons—must mow the nettles and thistles—speak when he is spoken to—do as he is bid—not play whist at more than sixteenpenny points—and drink one bottle of good old port wine every Sunday afternoon throughout the year. When Ben Jonson was told that Shakespeare had never blotted out a line which he had once written, the answer was, "Would that he had blotted out a thousand!" So I say to the land agents of England, look to your handiwork and blot out wherever you can. Let there be no payments in kind—a most unwholesome system; but if the landlord require the use of a waggon and team let him have them at so much a day—his hay and straw at so much a load. I have known cuses where this order to cart coal and

corn at inconvenient seasons has led very nearly to bloodshed when the tenant and the agent were not on friendly terms; and such awkward collisions should be avoided rather than courted by agreement. Again, if you have once confidence sufficient to let a man the farm the more he is left to himself the better, as there must certainly be no further interference with his buying and selling, his taking off and bringing back. Those days are gone never to return; and instead of carefully counting the loads of town-made muck which shall be returned a man may now, as has been said, bring back the manure in his waistcoat pocket. Of course there must be all due provision made for the condition in which the farm shall be given up, and for this I repeat whether under long or short holdings the best guarantee is TENANT-RIGHT or Compensation Covenants. By this means you induce a man to go on well to the last, or if he should go wrong he may be as readily met and made liable, under the same system of valuation, for any detriment he may have caused to the property. As regards the disposition of the game we are fairly entitled to expect some reform from the labours of the House of Commons Committee now sitting. Rabbits must be treated as the vermin which in the eye of the law they already are, their reservation being rendered illegal, and their destruction sanctioned as openly and generally as that of a rat or a mouse. Then, worst of all game abuses, the abominable practice of letting the shootings to strangers over the heads of the tenants must be abandoned, as neither landlord nor tenant should have the power to do so. Let the landlord be content with the winged game, and such a supply of hares as the farmers would preserve for him; and if he be a sportsman, and not a mere higgler, he will have little to complain of. The Duke of Beaufort has now no keepers but his tenants, and on some other large properties heavy game-preserving is being gradually abandoned. Nothing can tend "to make a landlord more unpopular" than an agent who is very jealous or over-exacting in this business of game-preserving. Let me recapitulate the points to be observed in framing an agreement in accordance with the times in which we live, the main principles of which should be Liberality, Brevity, and Simplicity. Let all covenants which go to tell a tenant when he is to take this crop out and when that—be struck out. Let all covenants which go to dictate how much he shall sell and how much he shall buy—be struck out. Let any reservation, on any terms, of rabbits or such-like vermin—be struck out. Let any claim to feudal service, such as a payment in turkey cocks, the feeding of fighting cocks, the carriage of coal or the delivery of straw—be struck out. Let the careful catalogue of such fiddling duties as trimming gooseberry bushes, cleaning water spouts and mending windows—be struck out; let it be simply stated that the premises shall be kept and left in tenantable repair. And, so far as be possible, let all the jargon, or, as Falstaff has it, "the damnable reiteration" of the lawyer's office—be struck out. On the other side, let there be special clauses enacting that the game shall never be either let or given over to any one beyond the owner or occupier, as the land can never maintain two tenants whose objects are so directly opposed to each other. And above all let there be Compensation Covenants, the very best guarantee for the retiring tenant doing the best by the farm, and leaving it in a good and husbandmanlike condition. There are of course minor details, which I have purposely omitted to notice, and the adjustment of which must in a degree at least depend upon the ever varying circumstances of time, place, and personal position. Turn where we will there is no subject growing so fast on public attention as the Land Question. It crops up alike in social circles and Quarterly articles. In the Order Book of the House of Commons, as issued this very morning, I find the following notice of motion standing in the name of Mr. James Howard, the Member for Bedford, while I may add that the resolution will be seconded by Mr. Sewell Read:—"Meat Supply.—To call attention to the high price of butchers meat, and also as to the extent to which an increased supply of animal food is retarded by the insecurity of the tenant farmer's capital and his want of freedom in cultivation; and to move a Resolution." The outside world, if I may so term it, is especially prone to take the business under its care, and while some of the schemes propounded are wild enough, there are more moderate measures of reform, which no doubt sooner or later will come. Prominent amongst these must be some improved system in the hiring and letting of land. There is

no denying the fact that farm leases and agreements are too generally susceptible of amendment; as it would be preferable that any movement in this direction should be instituted and carried through by the owners and occupiers themselves, rather than as the consequence of pressure from without. And these views I submit not so much as a lesson as a study for land-agents; as here the motive power will more commonly centre.

The CHAIRMAN said he thought it was quite right the tenant should send a turkey to his landlord every year, but a provision for that should not be inserted in his lease. On the other hand he should like it to be understood by the landlords that they should occasionally send a haunch of venison to the tenants. He did not wish to see that provision inserted in the lease. He agreed with Mr. Corbet that if the landlord retained the right of shooting, the tenant, by way of promoting a good understanding, should have a tap of good ale, a good cheese, and of course he would have a good loaf, at his house, for the landlord to partake of. And then, when the landlord left, he (Mr. Bridgland) thought he should not forget to leave either a brace of partridges or a brace of pheasants, whichever might be in season. Every tenant-farmer, with his heart in the right place, would be only too glad to show his landlord all the sport he could on the farm. For they might depend that all haggling about game would be easily adjusted if the landlord and the tenant properly understood each other.

Mr. AMBROSE WARD thought the ideas to which Mr. Corbet had given expression were very liberal, and perhaps rather more in favour of the tenant than the landlord. He had assisted to draw up a few leases, but had generally cut them very short, and had given the tenant full power to buy and sell as he pleased, but still fairly protecting the interests of the landlord. He did not think it was right to give some men full liberty to sell everything, because he had seen that power abused; but, if the landlord was careful to choose a good tenant in the first instance, he did not think that there was any necessity to impose restrictions upon him. Just now there was a great competition for land, and, unless the landlord took the precaution of securing a good tenant, he would do much injury, not only to himself, but to the country generally; for those who went in for high rents would have no difficulty in getting them, but those who gave them generally did much harm by taking all they could out of the land, and putting nothing into it. Agreements could not be too simple, and when there was a fair understanding between the landlord and tenant it was about the best agreement that could be had. He quite approved of what Mr. Corbet had said. He had gone into the question in a lucid way, and evidently thoroughly understood it. He thought Mr. Corbet would make a very good land-agent. He had known land-agents to do a great deal of harm, especially where they had the shooting themselves. If the landlord was a sportsman there was never any haggling or misunderstanding about the game. Rabbits were decidedly vermin, and did much damage to the crops; they bred very fast; therefore it was ridiculous to attempt to preserve them unless a man went in for a rabbit warren, and, if he meant to have a rabbit warren, why let him have one, and not a farm.

Mr. T. HAYES: Did I understand Mr. Corbet to say that he did not include drainage among the matters that should be the subject of Tenant-Right, as well as building?

Mr. CORBET: I said expressly I considered buildings and drainage as landlords' duties, and that they should not be entered upon by the tenant, except under special arrangement.

Mr. HAYES said, as a farmer in a district where a great deal of the land required draining, he was sorry to hear Mr. Corbet say so. He quite agreed with him that it should be the landlord's duty, but three-fourths of the drainage in the Weald of Kent would have remained undone if the tenants had not done it. If they were to have any fresh scheme of Tenant-Right he hoped the draining would not be shirked entirely by the landlords, otherwise it would not be done as fast as it ought to be done. In the lease he and his brother held there was a clause that there should not be any law, but that any dispute should be submitted to arbitrators, one to be chosen by each party, the arbitrators being left to choose their own umpire; and, as in the case of a valuation, they should decide it without any appeal.

Mr. TROUBECK had much pleasure in endorsing what Mr. Corbet had said, and he hoped it would be profitable to all

who had heard him, and that it would benefit both landlord and tenant.

Mr. LOVETT thoroughly agreed with what Mr. Corbet had said, especially with reference to rabbits, for they were the greatest pests a farmer could possibly have. The sooner they were done away with the better, for where rabbits were preserved there was no chance of growing anything. If a tenant had a farm close to a wood in which rabbits were preserved, it mattered little how much wire he used, for, as it had been justly observed, there were sure to be other tenants besides the landlord's tenants. As to agreements the shorter they were the better. No doubt a great many words were put into agreements that had no business to be there. If any gentleman in the room had an agreement, he did not hesitate to say that he had broken it scores of times.

Mr. FAUCETT said they were much obliged to Mr. Corbet for the lucid manner in which he had brought this question before the meeting. He remembered very well preparing some leases thirty years ago which had in them all those long rigmarole clauses about the muck, carrying nothing away, and so forth. Perhaps some seventy or eighty years ago there was some reason for having such clauses, because then there were no artificial manures, and the system of farming was entirely different from that of the present day. Now, however, the time had arrived when it was absolutely impossible to farm under such conditions. He had had some experience with reference to hares and rabbits to his cost, but he thought there was a great deal more damage done by that notorious person—the keeper—than by the wish of the landlord.

Mr. STONHAM said that a trustworthy old land-agent, well-known in this neighbourhood, had said that a good tenant did not want any agreement, and that a bad tenant would not act up to one. As Mr. Ward had very pertinently said, the most important thing for a landlord to do in letting a farm was to see that he had a good tenant, and when he had once got a good tenant, he should give him the greatest liberty of action. To impose a lot of those absurd covenants upon a man was like tying his legs and telling him to run. But he did think that where a long lease was given, the landlord should have some guarantee that the land should be left in proper condition, because it sometimes happened that death stepped in, and removed a good tenant with whom an agreement had been made. His estate might then fall into the hands of persons who during the last few years of the tenure would be interested in getting all they could out of the land; so that it was necessary in the interests of the landlord that he should be secured against any losses which might arise from such a cause. He did not know whether any of the gentlemen present had had the pleasure of reading a very important paper which Mr. Corbet had read before the Central Farmers' Club, in London, on the preservation of game; but, according to his view of the subject, the paper was the best on that question which had yet come before the public. If he was not mistaken about Mr. Corbet, he was no niggard supporter of those old-English sports in which they delighted and rejoiced, and he (Mr. Stonham) agreed with Mr. Corbet in saying that if there was a better understanding about game between landlord and tenant, and if "Mr. Velvetreen" had less to do with the matter, there would be much better sport for the landlord.

Mr. KEMP, from his experience as a holder of house property, could say that the better the landlord the better the tenant, and he thought the same assertion would apply to the owners and occupiers of land. He believed many of the complaints now heard arose from a want of care and caution in the selection of tenants and the making of agreements, which he was rather surprised at in these enlightened days. Now, however, their attention was being turned to the matter, and an act was in course of preparation for the improvement of lettings.

Mr. H. WHITE said he was very much troubled with game on his farm. It was only that morning he was looking at a piece of young hops, in their first year of polling, and they seemed to be coming on very well, but as fast as they made their appearance the rabbits ate them off. He had applied soot and lime, but all to no purpose, and to-day he had bought 500 yards of wire-netting, which, of course was a great expense, and a great deal of trouble. He thought, therefore, that if anything could be done in the way of altering the Game-laws, it would be a good thing. As a sportsman he did not wish to see winged game done away with, for he liked

to see it about the farm; but if the landlords were to leave the preservation of game in the hands of the tenants they would enjoy better sport, and it would be better for both.

Mr. CORBET thanked them very much for the compliments they had been pleased to pay him, but he had been somewhat disappointed that his paper had not called forth more discussion. However, in Kent, and in the neighbourhood of Maidstone more particularly, he supposed the farmers were in the happy position of having no land-agents who were lawyers. It was evident there were none of those legal gentlemen present, or they would have answered him that night; and the farmers of the neighbourhood must be in a perfect Arcadia. The Chairman had said landlords and tenants should meet each other, and that the latter should provide a good tap of beer and a luncheon when the former came shooting over their farms. Mr. Stonham had complimented him upon his (Mr. Corbet's) paper on game. It was singular that he commenced the paper in almost the very words used by the Chairman. He was a sportsman born and bred, and when he attacked the evil of the over-preservation of game he by no means attacked legitimate field sport. A great deal might be done by getting rid of the gamekeeper, and of the fishmonger in London who bought the game. On the other hand, if landlords would be content, like the Duke of Beaufort, to shoot such game as the tenant provided for him, and to allow the tenant to keep some for himself, that would be the fairest way of settling the whole question. Unfortunately, however, that could not be done, for there were a great many game-preservers who moved very slowly. He did not know whether Mr. White was protected against his landlord in any way, but in many agreements all the game and rabbits were reserved to the landlord. But if he held on anything like liberal terms, he must fight it out as best he could, and kill the vermin, as did a tenant in Norfolk the other day. In that case the shooting was let over the tenant's head to a lawyer in London. Finding the game increased very fast, the only remedy the tenant had was to build up an extraordinary fence, as big and as high and as awkward as he could make it, so that the hares had to go round and the young pheasants could not fly over it. The renter of the shooting said to the tenant that he was not farming in a fair way, and the result was that an action was tried at law, which was decided in favour of the tenant, so that they now had a precedent; and if Mr. White should be troubled in a similar way, he might erect a fence that no hunter in Kent could jump over, and no hare could get through. He was much pleased with the speech of Mr. Ward. No doubt, ten or twelve years ago, the paper he

had read would have been considered if not downright treason, extremely radical and wild. As to what Mr. Hayes had said on drainage, he might say that in a report issued by a committee of the House of Commons, improvements had been distinguished in two ways. There was temporary improvement, which arose in the ordinary process of farming, and to make that improvement was considered to be the farmer's duty. Then there were the permanent improvements, which cost a great deal of money, and those the committee, he thought very properly, said should be made by the landlord. Supposing a landlord was not in a position to do these, the tenant would be in a very false position if he incurred any great expense for drainage without thoroughly securing himself, as drainage certainly ought to be classed among permanent improvements. He understood Mr. Hayes to say that the tenants in this locality, when they did drain, drained at their own risk. That was not business-like—it was not a good commercial position to be in. As long as they were good friends with the landlords or the agents it was all very well, but directly they came to variance the business-like agreement should step in. There was another point, mentioned by Mr. Stonham, which he had heard referred to very often, and for which some provision should be made. He alluded to the case of a tenant who died during the run of his lease, and sometimes things happened very unfortunately in that way. After a good tenant was gone some one else came in to farm for the widow, and occasionally the farm was run out in a way which the landlord, his agent, or the original tenant never contemplated. But it must be understood, though he was arguing for the greatest possible liberality to the tenant, that it was absurd to suppose that the landlord should not be properly protected. He laid great stress on the word *properly*, but as to all those rigmarole things which were hung like the sword of Damocles over a man's head, and he never knew when the sword might fall, or whether it would kill or only maim him when it did fall, the sooner they were eliminated from agreements the better. He was very much gratified by such a discussion as they had been kind enough to honour him with, and by the meed of favour and approval with which they had greeted his paper.

The CHAIRMAN proposed a vote of thanks to Mr. Corbet for his very able and interesting paper, and said they were doubly indebted to him because he was not a paid lecturer, but simply came down to enlighten them, and set them thinking.

The proposal having been carried amid loud applause, Mr. Corbet briefly acknowledged the compliment, and the meeting terminated.

THE HEXHAM FARMERS' CLUB.

FARM BUILDINGS.

At the April meeting, Mr. Jos. Lee, Dilston, in the chair.

The SECRETARY stated that it was agreed at the last monthly meeting that the Club should petition the House of Commons in favour of some alterations in the Highway Act. The petition prepared by the committee was agreed to: "That the highways in many townships are in a deplorable condition. Your petitioners believe that in order to effect improvement in the roads a change in the Highway Act is imperative, viz., that the formation of highway districts be compulsory, instead of being permissive as at present; that the districts should, if possible, be conformable with the poor law unions; that the rates should be uniform throughout each district, and divided equally between landlord and tenant; and that the representatives at the Board should not be elected by townships or parishes, but by sub-districts, arranged according to rental or mileage. Your petitioners therefore humbly pray that your honourable house will pass a measure to amend the present Highway Act.

Mr. J. E. WATSON, architect, of Newcastle-on-Tyne, read the following paper on Farm Buildings. In former years nothing perhaps was more neglected in an architectural point of view, than the designing and arrangement of farm buildings, and I think it cannot be denied that most of the sites were

badly chosen, some being on low ground where drainage—which, however, at that time was little thought of—would have been impossible, and in many cases instead of the floors being raised from 6 to 8 inches, which they ought to be, were probably sunk to that extent or more below the level of the surface, the result of which is that the floors of the buildings were occasionally standing two or three inches deep with water and liquid manure coming in from the folds. Other sites are on the slope of a hill, and the ground excavated to make it sufficiently level for the buildings, and some important parts, such as the stables, byres, or the barn, are built against the side of the thus formed embankment, with the roofs nearly level with the surface; the consequence is that the water percolates through the walls, causing the floors to be always wet and damp, and in many cases, although drainage was easy, still perhaps not attended to or thought of. Again, some buildings are placed on the top of a hill, without having the slightest shelter, consequently in stormy weather the roofs have been blown off and the cattle almost starved to death by being exposed to the bitter blasts. I have also noticed that the farm houses were sometimes placed on the low side and close to the steading, and the moisture from the folds running in waste almost to the very entrance door. And in addition to those evils

how often we see the buildings placed at one side or in one corner instead of a central position of the farm. With regard to the arrangement of the buildings, no care or thought seems to have been entertained for the comfort or health of the horses and cattle, or for the convenience or saving of labour of the farm servant, but have the appearance of having been placed by accident rather than design; for instead of the straw barn being placed in the centre and contiguous to the stables, byres, and folds, where straw is mostly required, how often is it placed in an isolated position? as if it made no matter what distance the straw was to be carried and littered about—no matter whether the byres, stables, &c., were at a considerable distance from the folds, and the manure from them never trodden by the cattle, but merely laid up in a heap at the outside of the door, and perhaps the cattle, placed by themselves, exposed and without sufficient shelter during feeding in winter months, in wretched hovels unfit for the purposes for which they are required. I have also seen the stable and byres, with perhaps one or two hovels placed together, and the barn and straw house in quite a different part, or at the other side of the stack-yard, with a road running between them and the stables, and probably a more modern cart-shed, with a granary above it, in some distant position, and in some cases the granary is placed above the farm house at a considerable distance, so that the corn had to be carted to it from the barn. And with regard to the stables and byres, neither light, ventilation, or drainage was ever considered, which are now known to be so essential to the health and constitution of the horses and cattle. This is but a brief description of this class of buildings, and which might be treated upon at greater length, but I think sufficient to show the absurd manner in which the business of a farmer was carried on, and the slight regard which was paid to the comfort and convenience of the stock as well as the oversight in not providing the means for saving of labour in attending upon them. From the bad arrangement of such steadings, whatsoever new buildings may be required to increase the accommodation, there is little chance of being able to design them to advantage, or to make a suitable and necessary improvement either in the plan, the accommodation, or the site; therefore in such instances as those which I have already described, and when they are in a dilapidated state, I consider it the cheapest and best plan to have them taken down and have new buildings erected in a modern style, and on a suitable and convenient site. During the last few years agriculture as a science has made rapid strides in the cultivation and improvement of land, and with the aid of the steam plough and other implements which have been invented large tracts of land which formerly lay waste are now in a productive state, consequently larger crops as well as greater extent of grazing land for sheep and cattle have been obtained. It has, therefore, been found essential and necessary that additional and more convenient accommodation in the farm steadings should be obtained for the housing of stock and cattle, as well as for the advantage of both landlord and tenant, by the erection of suitable and well arranged buildings, totally different from the inconvenient and unsuitable erections which have existed for years, and for this purpose different agricultural societies have offered premiums for the best plan and design, and in the year 1861 the Royal Agricultural Society of England, at their exhibition at Leeds, offered a premium of £50 for the best arranged plan, and in that competition I had the honour of gaining the first prize. The plan now exhibited is almost a correct copy, and which I intend taking as my model in giving a description in this paper. The first thing to be considered, is the site, and in choosing this for a new building I am of opinion that it ought to be as near the centre of the farm as possible, this being the proper position for convenience. Keeping in view that it be of easy access by sufficient and good roads, that it should be a dry situation and easily drained by taking away both the day water and the water from the spouts, as well as the drainage of the liquid manure into the tanks, and also that it should be capable of affording a good and sufficient supply of water; not to be too much exposed, but in a sufficiently sheltered position; free from the faults described in the sites of old buildings, and to keep in view that the folds always face the south, so that the cattle may be sheltered and have the advantage of the warmth of the sun. By attending to these points not only is expense saved, as less excavation is required, less labour in laying the drains and foundations, and probably less expense in the cartage of the

materials, but also additional comfort and convenience may be obtained. In designing farm buildings I have always considered compactness and symmetry the great elements of composition, by placing the parts which depend upon each other as near together as possible, and removing to a separate part of the buildings in which no stock is housed, also to provide ample means for sufficient light and ventilation. The designing and arrangement of farm buildings are generally open to a deal of criticism and contention, perhaps more so than any other class of buildings, for in various parts of the country different systems of farming are adopted, consequently contrary opinions are entertained, and even in the same locality sometimes there exists a difference of opinion as to the arrangement of the steading and the methods of rearing and feeding of stock, some preferring stall feeding, some in favour of large folds, others in favour of small folds to contain four or five cattle each, some are in favour of open folds, with the feeding cribs covered over with the sheds to protect the cattle in wet weather, whilst some are in favour of the folds being entirely covered in, and which system seems to be advancing and gaining ground. I have also known in some cases objections made to liquid manure tanks, whereas others are favourable to them. As improvements in agriculture continue to advance, suitable and improved buildings will still be more required, and no doubt many of these differences of opinion will in course of time cease to exist. I have endeavoured to combat with these differences of opinion as much as possible in making the arrangement, so that it can easily be altered to suit either of the systems just mentioned, and the form I have adopted is simple and compact, easy access being obtained to each portion of the building without being much exposed in stormy weather as any one attending the horses, cattle, &c., can do so with comfort and little labour in comparison to that which was required in an old farm steading owing to the want of proper arrangement and the isolated position of some of the buildings. I have always arranged my plans so that the barn and straw-house should occupy a central position, as the straw is an article in constant request; therefore the buildings, folds, &c., which require the greatest supply, ought to be grouped round it as much as is compatible with the size and extent of the building, and to have a direct communication with the feeding boxes, stable, byres, hovels, &c., to enable the supply to be easily kept up, and as much under cover as possible. The same arrangement applies to the turnip houses, having passages to the feeding boxes and sheds, and in some cases I have made these passages sufficiently wide for a tramway with a suitable truck or waggon to convey the cut turpins to the cattle. The passages between the covered feeding sheds are sufficiently wide and spacious to allow of a sufficient quantity of turpins being always stored for the use of the cattle in the adjoining folds. The granaries are above the hovels for the sake of ventilation extending each way right and left so as to store different kinds of corn, and having a direct communication with the under and upper barns as well as with each other, the straw-house being in the centre, the full height of both stories, to afford space and accommodation for packing a large quantity of straw. It is essential that the barns and granaries ought to be constructed so that they may be kept free from vermin. To accomplish this I invariably have the bottom or ground floors laid with concrete cement on a foundation of broken stones or bricks, from 6 to 9 inches in thickness; the floors of the upper barn and granaries may be done in a similar manner, by laying the floors in the first instance with rough, narrow battens, open at the joints to give a key to the cement work; the walls ought also to be plastered up to the window sills with a good thick coat of cement, which, as well as making them proof against vermin, is also a preventative of damp. The feeding boxes are placed in close proximity to the folds, and are well ventilated and lighted from the top with squares of rough white glass as skylights, slated in with the slates; a passage is arranged in connection with the turnip house for feeding the cattle; the door may be hung in two halves in height, so that the upper part may be left open when extra ventilation is required; the division railings are made moveable, so that they can be taken out when larger boxes are required. The feeding sheds are open, and made sufficiently wide for cattle to feed entirely under cover, the remaining part of the fold is open, but as contrary opinions are still entertained as to the desirability of having the folds covered, it will be seen on reference to the plan that a roof can easily be

placed over the open part at a small cost, or the whole may be left open without interfering with the general arrangement. The stables, byres, &c., are placed at right angles to and at the end of the hovels, in such a position that they can without much labour be supplied with straw and fodder; the manure also can easily be thrown into the folds. In some localities there is a difference of opinion as to whether a hay loft ought to be placed above the stable; some prefer it, and imagine that without it a sufficient quantity of hay cannot be stored; others condemn it entirely. My experience teaches me to think that it is better without, and to keep the stable open to the roof, with proper ventilation at the ridge, and a few glass squares, which can be had for a trifling cost, slated in to give additional light as well as an additional degree of comfort. The Inclosure Commissioners object to lofts above the stables, and requires well ventilated houses for hay attached to each stable. Or in some instances I have introduced a small window at the head of each stall, made with solid frames, and hung on pivots; this not only throws light into the racks and mangers, but when the stables are empty they can be opened, and having windows at the other side a through draft is created, which thoroughly ventilates the stable. Metal fittings for partitions of stables, also for racks and mangers, are now greatly manufactured, and if some of a cheaper and less expensive style could be adopted, I think they might be used to great advantage in stables of farm steadings. In fitting up the byres I always recommend the partitions between the cows to be made of stone slabs, about 4 inches in thickness, and the feeding troughs of fire clay or cement. I find by experience that wood work soon goes to decay, and the stone work is more easily kept sweet and clean. The calf house is in direct communication with the byre, fitted up with pens, and properly lighted and ventilated. Separate loose boxes are provided for sick horses and cattle, without having any communication with the other parts of the building. The piggeries are also placed convenient to the folds, so that the manure can easily be put into them. But as metal fittings are now much used they are sometimes fitted up more in connection with the other parts of the buildings. With regard to the floors, which is generally done with rough paving I am inclined to think that the whole area of the building ought to be laid with concrete cement flooring that for the stables, byres, &c., to be well grooved to prevent the horses and cows from slipping, the remainder may be plain; the channels can be formed without the aid of dressed stone, and it would be the means of preventing damp and harbour for vermin; the extra cost would perhaps be something like 2 and 2½ to 1 at the outset, but as no repairs would be required for a considerable length of time compared to what is required for common paving, it would perhaps be as economical in the end. I have adopted this method successfully in stables attached to noblemen's and gentlemen's mansions. Machinery can be fitted up with the machinery of the barn in connection with a shed and saw frame for the purpose of cutting gates, railing, &c., which are always required for the use of the farm. The drains ought to be properly laid and to communicate with each stable, byres, feeding sheds, &c., so as to convey the liquid manure into the cesspool. Drains ought also to be laid to convey the rainwater from the roofs to some convenient outlet for the purpose of keeping the steading always dry. The superintendent's house, cart-shed, workshops, &c., are placed on the south side of the square, the back wall of which forms an excellent garden wall in connection with the farm house. It will be observed that these buildings where fires are required are placed in this range to be as far as possible from the straw, so as to prevent the danger of fire. Another advantage is, that the superintendent's house being placed at the entrance no one can have admittance without being seen, and the entrance gates as well as the other gates leading to the fields being locked at night makes the place secure, and the superintendent living on the premises can always attend to the horses and cattle, especially when required in cases of necessity. Dairy farms can be constructed on a similar plan, having the byres and feeding byres under one roof, similar to what an entirely covered fold would be, having a direct communication with the straw and fodder house, dairyman's house, &c.; the stables, cart-shed, with granary above, barn, straw-house, &c., forming a distinct part, but all in connection with each other. In the erection of farm buildings care should be taken that the floors are always well kept up from the surface of the ground,

to prevent damp as much as possible. Not only have improvements taken place in the plan and arrangement of steadings, but likewise more taste is shown in the elevations, and by the introduction of some central feature in the form of a simple campanile gives it a neat and picturesque appearance. The future advantage to be gained is that the buildings may be enlarged to any necessary extent; in fact, by mere contraction or expansion of dimensions, may be adapted for a farm of any size without in the slightest degree affecting the design or arrangement. And as it is now considered by several eminent practical agriculturists that in a few years open folds will be considered "as things of the past," a glance at the plans will show that in addition to the roof over the feeding sheds in the folds, which are at present generally sufficient, how simply another roof may be put over, the open part making it entirely enclosed, or otherwise the folds for fat cattle may be covered in, and those for the young cattle left open. The hovels, then, not being required could easily be converted into additional byres, feeding boxes, or store rooms, as might be required. I trust, therefore, that the design I have adopted will be considered not only good in itself but that it is capable of alteration and adjustment so as to meet the ideas of different people for some years to come, whatsoever their opinions may be as to the arrangement of farm buildings, and the methods of rearing and feeding of cattle. With regard to the cost of buildings, it is generally understood that the stones are to be had on the estate for the expense of winning only, and that the cartage of the materials is done by the tenant. In such cases the general cost amounts to something like 3d. per cubit foot. No doubt there is a difference with regard to some of the buildings, as a stable, byre, &c., with its fittings and requirements will cost more than a plain straw barn or feeding shed, but taking the whole into consideration, the price I have mentioned is near to what the cost will be; of course the advantages of different localities must be taken into consideration. Perhaps the roofing is a subject which requires most consideration, as the Royal Agricultural Society of England, at their show in Manchester, in 1869, offered premiums for the best description of roofs, and at which I was appointed one of the judges to report upon them. There were models of slate, iron, and felt roofing exhibited, and I cannot explain their merits better than by quoting from our report. "Slate roofing being familiar to all persons, it is unnecessary to describe the mode of construction which professes no speciality; the cost per square of 100 feet may be taken at £5 0s. 10d., or rather over 1s. per foot. The models or examples of galvanized corrugated iron roofs on wrought iron framing were tied together by the ordinary wrought iron rods, with king post rod and key; the cost per square was stated to be £3 18s., or nearly 9½d. per foot, including wall plates. The felt roofing was in the form of a circle, of which it was stated the pitch should be 1¼ inch per foot, preserved in its shape by a girder formed of bows and strings, with lattice work between them tied by a solid web of timber equal to one-fifth of the span to give extra strength to the bearings. These lattice girders are from 8 to 10 feet apart, on these are purlings 22 inches apart, covered with a sheet of half-inch boards in long lengths, and from 9 to 15 inches broad, upon which is laid the felt, which is again covered with tar or varnish properly prepared; it was stated that spaces 75 feet in width had been covered with perfect satisfaction, and that spaces 100 feet in width could be covered without any intermediate supports. The cost per square is stated to be £1 12s., or nearly 4d. per foot. The period of durability of slate roofing may be stated to be at least fifty years, that of iron twenty-two years, and that of felt eight years; the first requiring no other act of maintenance than ordinary repairs, the second requiring strict attention in painting to preserve it from the corroding effects of uprising vapours, and the third, in addition to repairs, requiring a coat of tar or prepared varnish every other year to preserve it from the effects of the sun and weather. The question of economy is not, therefore, determined by the first cost, but must have special reference to the periods of duration of each description of material, for, as the roof will require to be replaced at the termination of each period, it is necessary that the principal money first expended should be repaid within such periods. The true state of the case as respects economy will be understood, therefore, by comparing the annual amounts per square of ground covered, which must be gained to repay the cost within the periods mentioned, and calculating the value of

money at 5 per cent. interest, they are as follows : Slate, 5s. 6d. Iron, 5s. 10d., with painting once in three years. Felt, 4s. 11d., with tarring once in two years. Each is liable to ordinary repairs, iron and slate requiring very little indeed, and felt requiring more." And, in conclusion, and to bear out my remarks, perhaps I may be allowed to quote from the report of Mr. H. S. Thompson on the capabilities of my prize plan at the Leeds Exhibition, in 1861, in which he states : "The first points to be noticed in the plan which received the prize of £50 are its compactness and symmetry. Compactness in farm buildings means the reduction to a minimum of the space to be traversed by the labourer in foddering and littering the live stock, in collecting and preparing them food, and in the other numerous tasks which require him to be continually moving to and fro. A small diminution of the space which has to be so frequently passed over leads to a considerable saving of the labourer's time, and consequently of the farmer's money. Symmetry may at first sight be considered a minor advantage, one more belonging to the ornamental than the useful. This interpretation of the term would, however, very imperfectly express the meaning attached to it here. True symmetry in farm buildings means not only a pleasing and symmetrical arrangement of the indispensable elements of a farmery, that no part of the establishment shall be unnecessarily far from other buildings with which frequent communication is required. The barn, for instance, which supplies straw, an article in constant request and which is bulky and difficult of removal, ought to be placed as centrally with respect to the stables and cattle sheds as is compatible with ready access from the exterior to the barn itself. This is well accomplished in this plan by removing to a separate yard all the buildings in which no stock is housed, thus allowing those in which straw is required to be grouped immediately around the straw barn. By this arrangement the additional advantage is obtained of close proximity and ready intercommunication between the cart-shed and implement house and the smith's and joiner's shops, whilst the stables are so placed that ready access is provided for the horses to the carts, implements, and shoeing-smith. The shape and position of this yard are remarkably good, giving unusual facility for the removal of the manure from the different cattle yards, one of the heaviest operations which the farmer has to encounter. The old proverb, too, "Fast bind safe find," has not been forgotten, and the key of these yard gates once in the farmer's pocket every yard and office is closed against all intruders who are not prepared for burglary."

Mr. SMITH quite approved of the plan of covering in fold-yards for fat stock, because the warmer they were kept the less meat they would take. If stock were kept in a cold situation the portion of the food that was given to fatten them would be required to keep up the animal heat of the cattle ; and, therefore, for fat stock he considered that this was a very great improvement indeed. He approved of the flooring being of concrete, as it entirely prevented any vermin working its way up. He very gladly proposed a vote of thanks to Mr. Watson for the excellent lecture he had given them.

Mr. GOODRICK said there were several things in the paper with which he entirely agreed ; and one was the cementing of floors. The cementing of the floors of stables and this sort of buildings had only been spoken of in contrast to that of common paving, but if they compared it with flagging cementing was the cheaper of the two, and they got surface drains in easier than having to dress stones for the purpose. Mr. Watson had not entered into any comparison of the different kinds of feeding, such as feeding under covered yards, feeding in cattle boxes, and feeding cattle tied by the head in byres. Before coming to the meeting he made a short calculation as to the expense of the different systems. He found that covered courts, built, say, to accommodate ten head of cattle, cost about £16 a-head ; for cattle boxes, he had put them up for the chairman and others, at £10 a-head, and he had lately put up byres at £7 a-head. So that they saw that byre feeding was the cheapest, and they could have a double byre with a passage up the middle, as Mr. Watson stated, for carrying up food, and a passage behind for taking out the dung. They could put up byres at £7 a-head, and he thought that tying up cattle by the head was the cheapest method. Of course, where they had cattle boxes the beast could roam about and exercise itself in some measure, and where they had a large quantity of straw he would prefer boxes, especially for bullocks. Covered courts,

being so much larger, required a strong roof, and the walls were extensive, and altogether they were much more expensive than either boxes or byres. He cordially seconded the vote of thanks to Mr. Watson for his valuable paper.

The SECRETARY, Mr. Trotter, said with respect to what was becoming the prevailing practice of having stables open to the roof, he did not know that that was the best plan, although it was recommended by Mr. Watson. He had seen a few stables of this kind, for example, at Nafferton, where they were open to the roof, and he found that the horses suffered so much more in winter months. He held that a stable ceiled eight or nine feet above the floor was better than a stable open to the roof, however well sarked it might be. There was an interval draught ; the warm air ascended up the middle of the building and kept up an incessant draught. He questioned whether they could get clear of that draught, and he had seen the water from condensation dripping on the horses' backs, and under such circumstances a horse could not be kept thriving. He was not sure that Mr. Watson had hit upon the right arrangement for the straw barn ; he had continued it into the centre of the yard. Without being desirous to find fault, he suggested that it would have been well to continue the straw barn to the right and left in T shape. This was an advantage when thrashing, as they were thus able to keep the wheat and barley straw separate from the oat straw, the wheat and barley straw being good for bedding the cattle, while the oat straw was better than wheat straw for the cattle's eating. That was his idea of the situation of the straw barn, and when they got the straw barn well placed it was the key to the remainder of the farm buildings. He had had something to do with the erection of farm buildings in Cleveland for Mr. Chas. Palmer, and he believed that the arrangement of the buildings had been a success. On this farm there were some forty cattle boxes, and the turnips were carried to the cattle on trucks. He was glad that the meeting, though small, had expressed its approval of what had been brought before them.

The vote of thanks to Mr. Watson was carried.

Mr. WATSON, in returning thanks, said that he did not expect that his plan would please every one ; but by discussing the points that had been raised they brought out things that they had not before considered. With regard to the straw-house it was perhaps better to have it in such a shape that the different kinds of straw could be kept separate, and that could be done without interfering with the general arrangement of his plan. Any little alteration that would suit different parties with different ideas might be made without materially altering the whole plan. He thought from the exhibition which took place of plans, referred to in the paper, his was the most compact and convenient of any exhibited for that purpose. With regard to stables being open to the roof, his idea was that it was a better way than having lofts above, and perhaps the sarking would do away with that coldness which had been spoken of. From the breath of horses and cows the plaster came off. He again thanked the members for the kind attention they had given him and for their cordial vote of thanks.

Mr. GOODRICK stated that he had to put up a stable at right angles to a grey slate building. The rest of the stable was done with blue slate, and this also was done with sarking. The grey slate was thought sufficient to turn frost or snow or anything else, but during a severe storm there were two horses under the grey slate, and the slate was covered with frost inside, but those under the blue slate, which was sarked, were standing comfortable and warm.

The SECRETARY thought it would have been the contrary.

Mr. DRYDON preferred covered courts for steers. Store cattle should not be kept too warm in winter, or they would not do so well when turned out to graze. For fattening cattle a certain amount of heat was requisite and right. As to heifers, he did not care whether they were in stalls or boxes, one was as good as the other if equally well constructed, but for steers he preferred covered courts, and not more than six in each court. He believed that they did better in covered yards than in boxes, and he had not seen or heard anything which disturbed him in that conclusion.

The SECRETARY said there was no mistake as to the advantage of having yards covered in. He saw enough of that about

a fortnight or so ago when they had a fall of snow, and the animals in the open yards were up to the knees in puddle, and it took an immense quantity of straw for them.

Mr. DRYDON said that another difficulty in the way of getting the best farm buildings was the expense, which was the cause of a good deal of patchwork.

Mr. GOODRICK thought that the turnip-house ought to be as conveniently placed as the straw barn.

The CHAIRMAN thought that the best plan was to do away with the old farm buildings and get new ones, for they were

almost sure to make a bad job of it if they began to patch. These plans could be contracted to suit small farms, but in making plans for farm buildings they should always take into consideration the kind of farm for which they were intended. From experience he found that sheep paid him better than cattle on light land. Where they had little straw they should tie up the cattle by the neck, and in this case byres would perhaps be best. Store cattle should never be kept too warm in winter, as they did not do so well the next summer when put out to graze.

THE AYRSHIRE FARMERS' CLUB.

At the annual meeting held at Ayr, Mr. Brown, Ardnell, president, in the chair, the meeting proceeded to discuss the utility of the wheel ploughs.

Mr. BROWN (Ardnell) said that at a previous discussion on the subject, when a paper was read by Mr. Wallace, he had expressed an aversion to wheel-ploughs. He had now had two years' experience of the double-furrow ploughs, and one of the single-furrow, and he was still of opinion that the double-furrow plough could not be so easily drawn as the single-furrow without wheels. He found that three horses could work the double on moderate land, but on stiff land it generally required four. He expressed himself more in favour of the single-furrow wheel-plough. They would be easily drawn by two horses, and easier guided than any of the other ploughs, and, with a ploughman possessing a natural taste, they did the work remarkably well on any kind of land.

Mr. CUNNINGHAME (Chapelton) said that Mr. Brown had expressed the views that he himself held in regard to these ploughs.

Mr. ROBERT WALLACE was glad to hear Mr. Brown express himself now in the terms he had done. He was sure that when Mr. Brown, about two years ago, expressed himself so much against these ploughs, he would alter his opinion, which he was now glad to see was the case. He (Mr. W.) did now no work with any kind of plough except the wheel-plough, and had only one common plough for each of his farms. He held that the double-furrow plough was as easily drawn in proportion as the common single-plough. He also expressed himself very favourably in regard to the single-plough on wheels, and he believed that this was the plough that would come into general use.

Mr. CALDWELL (Knockshoggle) said that he had not yet had experience with these ploughs, but he believed that they were very advantageous to the farmer when they were constructed on a good principle, and wrought on easy soil. He had seen two of these ploughs at work once at a ploughing match. They were of different makers, and he was astonished to find that the heavier-made plough was drawn more easily than the lighter one. No doubt this was entirely owing to the heavier plough being constructed on a better principle than the lighter one. He could not say that he was at all partial to these ploughs where the land was of a stiff clayey and hilly nature. A difficulty he experienced with these ploughs was to get proper persons in the neighbourhood to repair them when anything went wrong.

Mr. YOUNG (Highfield) was very much pleased with the working of these ploughs, but the difficulty he had was to get men to take proper care of them.

Mr. WHYTE (East Raws) had seen the double-furrow plough work very well.

Mr. WALLACE, JUN., said that he had had some experience with the wheel-ploughs, having wrought them on his father's farm. He thought that they would be greatly improved, and do the work much easier, if the share was not made quite so

broad. He thought that if makers would pay greater attention to friction in the construction, these ploughs would be much more easily drawn, and of greater demand among the farmers.

Mr. KERR said that his experience had been very much spoken already in the discussion. He had now had three years' experience in working the double-furrow plough. The first year of his experience the plough often got disarranged and was very troublesome; he got it repaired the second year with a local blacksmith, and he found that it did the work very much better, and now this year he found that it did the work very well. His plough generally turned over a Scotch acre in about seven hours, which he considered very good, and the horses were not at all heavily drawn. He was of opinion that these ploughs would be worked with greater advantage to the farmer, and that they were suitable for any kind of soil, whether loose or stiff clay soil.

Mr. R. M. CUNNINGHAME believed there was something providential in the introduction both of these ploughs and of reaping machines, seeing the great agitation connected with the remuneration of agricultural labour. He was about the first who introduced these ploughs into Ayrshire. He had one sent from Messrs. Fowler and Co., Leeds, when they came out, just to try and see if it would be of any use. He was very well pleased with the working of these ploughs, and believed that, although they cost a good sum of money, they soon repaid themselves.

The CHAIRMAN was very well pleased with the manner in which the subject had been discussed, and said his own experience had been pretty generally expressed. In light land he always used the double-furrow plough, and he found that with a good ploughman it did the work very well; but he always used the single-furrow common plough on his heavy land.

Mr. DAVID CUNNINGHAME (Chapelton) said that there was a gentleman who he thought was entitled to the thanks of the Club, and also a vote of sympathy, seeing the position in which he had been placed: he referred to the ejection of Mr. Hope from the farm of Fenton Barns by his landlord. He thought that this Club ought not to allow this opportunity to pass without expressing to Mr. Hope the esteem in which they held him, and sympathy for the situation in which he had been placed. To all appearances his ejection was quite uncalled for. He begged to move "That the Ayrshire Farmers' Club express its sympathy with Mr. Hope, of Fenton Barns, in the circumstances in which he has been placed by the notice given him by his landlord that his lease would not be renewed—it is believed, in consequence of his holding and expressing different political opinions from those entertained by his landlord—and that this Club has also to thank Mr. Hope for the manly independence with which he always upheld the agricultural interests of the country and all questions affecting it, believing, as they do, that he has done more to advance agriculture than any tenant-farmer in the kingdom, and that a copy of this resolution be transmitted to Mr. Hope." This was seconded, and unanimously agreed to.

THE GAME LAWS COMMITTEE OF 1846.

REPORT AS AGREED TO ON THE 27TH JUNE, 1846.

1. Resolved, That it is the opinion of this Committee, that the Common Law of England has always distinctly recognised a qualified right of property in game; and that from a very early period it has been found necessary, by statutory enactment, to make some special provision against the attempt to steal or destroy a species of property peculiarly exposed to depredation.

2. Resolved, That it is the opinion of this Committee, that the stringency of the game laws has been from time to time materially qualified and relaxed.

3. Resolved, That it is the opinion of this Committee, that the recent Act, 1 and 2 Will. IV., c. 32, vested the property in game in the occupier of the soil, and distinctly recognised in game, as the subject of sale, one of the essential qualities of private property.

4. Resolved, That under these circumstances the tenant has at all times the power to secure the game to himself, or to reject the tenancy, if the propriety of the lands insist on a reservation being made of the game in his (the proprietor's) favour.

5. Resolved, That it is the opinion of this Committee, that to exclude game from the protection of the law would be inconsistent with a due regard to the security of other property.

6. Resolved, That it is the opinion of this Committee, that the taking of game by persons who have no right of property in it should continue to be the subject of penal legislation.

7. Resolved, That in reviewing the statutes now in force with reference to the pursuit and sale of game, it appears to your Committee that alterations may be suggested which, without impairing their efficiency for the repression of crime, would prevent the unequal or excessive punishment of persons who violate their provisions.

8. Resolved, That it is expedient to abolish cumulative penalties for poaching.

9. Resolved, That your Committee are not, however, prepared to recommend such an alteration of the law as would exempt from more severe penalties those who in the illegal pursuit of game commit at the same time a breach of the revenue laws, or those who in the day-time, being armed, and in numbers, are guilty of violence.

10. Resolved, That it is the opinion of this Committee, that the penalty imposed by the statute, 52 Geo. III., c. 43, for sporting without a certificate, appears excessive.

11. Resolved, That it is the opinion of this Committee, that the space of three days allowed by section 44 of 1 and 2 Will. IV., c. 32, for giving notice of appeal against any summary conviction under this Act, should be extended.

12. Resolved, That it is the opinion of this Committee, that it is expedient that so much of the 5 and 6 Will. IV., c. 20, which allows a moiety of the penalty levied under the 1 and 2 Will. IV., c. 52, to go to the informer, should be repealed.

13. Resolved, That it is the opinion of this Committee, that no person convicted of night poaching, under s. 1, 9 Geo. IV., c. 69, whose offence is unattended by circumstances of aggravation, should be subjected to the punishment of transportation.

14. Resolved, That it is the opinion of this Committee, that no person convicted of night poaching, under the first section 9 Geo. IV., c. 68, should be required to find sureties for not repeating such offence.

15. Resolved, That it is the opinion of this Committee, that, apart from considerations of revenue, every owner or occupier of land having the right to kill the game on that land, should have such right without being required to take out a game certificate.

16. Resolved, That your Committee further recommend the abolition of certificates as regards the pursuit and destruction of hares by means of packs of hounds, or by greyhounds;

and also to recommend the deduction of the duties on greyhounds to those imposed on common dogs.

17. Resolved, That your Committee regret that great facilities still exist for the disposal of game.

18. Resolved, That it has been suggested to your Committee, that by imposing additional legislative restrictions upon the sale of game, such facilities might be diminished, if not altogether removed; but the practical difficulty of enforcing any such regulations appears to your Committee to be almost insurmountable, and the regulations themselves would necessarily be of so stringent and vexatious a character that your Committee cannot recommend their adoption.

19. Resolved, That it is the opinion of this Committee, that the powers of constables should be better defined and enlarged, in regard to the search and detention of persons found under suspicious circumstances with game in their possession; and that power should be given to constables to search public-houses and beer-shops (licensed to sell off as well as on the premises) for game, it having been proved before the Committee that they are extensive receptacles for stolen game.

20. Resolved, That it is the opinion of this Committee, that the present time fixed for the period at which feathered game becomes a marketable article, and saleable by the dealer, should be postponed; and they recommend that the sale of each species of game should be deferred until one day after the season for shooting it has commenced.

21. Resolved, That your Committee has received evidence to show that the preservation of large quantities of game has been the frequent cause of damage to the neighbouring crops.

22. Resolved, That it is the opinion of this Committee, that in cases where the damage done to the growing crops of the occupier is caused by game belonging to or reserved by the owner of the land, such damage may be made the subject of pecuniary compensation.

23. Resolved, That it is the opinion of your Committee, that although instances to the contrary have been proved to your Committee, evidence has been adduced before them which warrants the conclusion that, in general, a tenant's just claim for compensation is complied with by his landlord.

24. Resolved, That it is the opinion of this Committee, that great difficulty must always exist in determining the amount of damage which has been inflicted by game on growing crops, and that the estimate of such damage, however skillfully made, is rarely satisfactory to both parties.

25. Resolved, That it is the opinion of this Committee, that where, from the vicinity of the preserves of adjoining proprietors, such damage must be attributed to the game bred and preserved therein, the reparation for such damage cannot generally be made the subject of previous agreement.

26. Resolved, That it is the opinion of this Committee that under these circumstances, cases of hardship may be expected to recur; but the extreme difficulty of establishing the liability of any particular party for the damage done, or correctly assessing the amount of such damage, have induced your Committee to reject the suggestion that an action on the case would be a fitting or practical remedy for damage done to growing crops by game.

27. Resolved, That it is the opinion of this Committee, that this species of damage is to be attributed mainly, if not entirely, to hares and rabbits, and that no appreciable proportion of such damage can be ascribed to feathered game.

28. Resolved, That it is the opinion of this Committee, that the law in Scotland with regard to game differs from that in England in many essential particulars, and but little evidence respecting that part of the subject has been adduced before your Committee.

OVER AGRICULTURAL SOCIETY.

ON MIXED FARMING.

At a meeting at the Wheatsheaf, Over, Mr. J. Slater in the chair, Mr. J. ASTON, of Brassey Green, said :

The subject selected for this evening's discussion is of a promiscuous nature, and affords ample scope for an imaginative and fertile mind; but my limited powers and paucity of language must necessarily confine me within narrow limitations, and allow plenty of room for your reflections. I have been born and brought up an agriculturist; and if I had life to commence again and an offer made, I do not think I should choose any other occupation. Agriculture, like many other callings in life, has difficulties to encounter and obstacles to overcome. There are losses, crosses, and disappointments, which at times harass the mind and debilitate the physical strength; still, numbers prefer the labours and fatigues of rural life to being pent up in narrow alleys and smoky cities. To advocate an unalterable mode of farming in all districts and on all descriptions of soil is an outrage on common-sense and insulting to enlightened reason in this advanced age of the world. Some are of the opinion that it requires years of study and experience to make a successful agriculturist, and this science is one of the most difficult to master. The more knowledge we possess on various subjects the better, providing it is properly applied; and however deep the researches into the subject now under consideration, perfection cannot be reached during the time allotted for man on earth. Still, there are numbers of agriculturists who have accumulated good fortunes in a few years that were illiterate characters. In my opinion the general outlines of farming may be acquired in a short time and at a small expense. If a person will keep his eyes, ears, and mind open to the truth, and closely watch all useful and successful experiments, he will soon possess all that is requisite to make a competent agriculturist. The great secret of success in farming mainly consists in gradual improvement, skilful management, and constant application. There is an old proverb which says, "Those who will not mind their business will soon have no business to mind." There have been many fulfillments of this proverb in our time. Inattention to business, indulging in drunkenness, and delighting in wantonness have brought numbers to beggary, disgrace, and ruin. Whatever mode of farming is adopted, there must be the application of skill and energy in order to be successful, but especially must this be the case if all our energies are in one direction. The altered state of things requires that agricultural operations should be conducted on principles to meet the necessities of the great consuming public. Still, there must be great caution exercised against rushing from one extreme to another, the result of which would overstock the markets with those commodities for which there was but small demand. If agriculturists were more careful in purchasing and disposing of stock, and would lay up in store for dry summers and hard winters, there would not be such great fluctuations in price as frequently take place within short intervals of time. Stock should be sparingly bought when dear, and rather freely when cheap, which would soon regulate prices; and it is wise to sell when others in general are holding, and retain when nearly all are selling. Farmers act very unwisely in forcing stock so much beyond their real value at public auctions or elsewhere. A foreigner might reasonably conclude that rent, taxes, and wages were low, and agricultural produce very high in England, when witnessing such scenes as frequently take place when persons get fresh on gin and beer. The aspect of farming in Cheshire is different to what it was some years ago. Under existing circumstances it would be very adventurous to keep a large dairy or feeding stock, or have all the land devoted to tillage purposes, as such great changes are continually taking place. Mixed farming is highly to be commended, and is undoubtedly the safest and most judicious course for agriculturists to pursue. Though all my lauds is down in grass, and I mostly keep a good quantity of cattle for dairying, feeding, and store, still I

would not recommend others to adopt the same plan unless occupying very stiff and thin-skinned soils. The vast quantities of American cheese which of late years have been pushed on the English market, lowering the price of all descriptions, but especially the medium and common qualities, present a new phase in Cheshire farming, and should induce us to turn our attention to such modes of culture as shall meet the growing necessities of the times. The warning note which sounded through this country some years ago from America was unheeded, and its vibration soon died away. We treated with indifference Brother Jonathan's threatening attitude and trusted too much in our former achievements. Though we were sensible of our inability to battle with such a formidable opponent on the score of rent and taxation, the idea was never entertained that our countrymen would turn their backs on their own commodity and take so freely to cheese from another nation; but the fears which some time ago seized the minds of a few have been fully realised through the past season, and we have reaped the sad fruits of overstocked markets and disheartening prices. And a similar warning voice is being continually sounded in our ears from some of the British Colonies which may soon accomplish similar effects in the prices of beef and mutton, which should incite us to greater activity and enterprise in agricultural pursuits. The high price of land, increased taxation, and rapid advance which has lately taken place in wages incapacitates the British farmer to compete with those of other lauds, and unless this state of things is checked his prospects for the future will not be cheering. It will require the prompt and united action of Parliament and landlords to meet the difficulties and lighten the burdens of farmers, and such action alone will enable them to stem the tide of opposition which retards their future prosperity. Rents must be kept down, taxes lowered, and improvements carried forward. There must also be great economy exercised in the expenditure of all public moneys, and burdens equally and equitably borne. While it is the duty of Parliament to economise public expenditure, and landlords to provide suitable and convenient homesteads, ridding the fences of all cumbrous and unnecessary timbers, and keeping down rabbits and hares which are so very destructive to valuable crops, causing great waste in the good bounties of God's providence, thereby inflicting an injustice on the community, farmers should put forth strenuous efforts to improve the soil. They must not depend on others for what they are capable of performing themselves. There is nothing like self exertion, and nothing makes a person feel his responsibility so much and impels him to become a benefactor to the human family. Our soils possess great strength, and when fully developed have immense resources at command. Two blades of grass must be made to grow where only one was formerly found, and tillage lands improved and cultivated so as to cause them to yield luxuriant and remunerative crops, that there may be greater quantities of beef and mutton and other articles of diet produced, to lessen foreign importations, which will make us more self-supporting, and enrich the nation. Mixed farming appears indispensable at the present time to meet the great fluctuations that are continually taking place in agricultural produce. Where land is adapted for dairying and feeding, our attention may be directed to both, so that if cheese is dear and beef and mutton cheap, we shall gain by the former if loss is sustained on the latter. And, on the other hand, where large farms are suited for corn growing, dairying, and feeding, the occupier's position is still more safe and secure. It is not wise to make cheese and grow corn in the immediate neighbourhoods of London, Manchester, and Liverpool, where new milk commands high prices, and to cart it out of districts where railways are not contiguous is attended with great inconvenience and considerable expense. There are some districts and farms better adapted for one purpose than another, and due consideration and good judgment ought to be exercised before deciding on plans for action. Some persons have

no liking for corn growing, and it must be a matter of necessity to induce them to engage a tenement specially adapted for the purpose. There are others who are not favourable to dairying, and in order to be successful it is advisable, as much as possible, to enter on holdings suited to our different tastes and inclinations. Having had but little experience in tillage farming, I greatly stand in need of becoming your pupil and listening to your instructions; but however small as may have been my experience here, I do not hesitate to condemn the ancient custom of summer fallowing, and having to pay two years' rent, taxes, wages, wear and tear, with one year's profit. There are hundreds and thousands of broad acres of land in Cheshire I would not prepare for seeding on the afore-mentioned plan if rent and tax free, and in attempting to cultivate such soils that have been so impoverished with the plough generation after generation is a waste of time and a loss to the community. Nor would I, as a rule, advocate the improvement of them when under tillage, but renew the constituents of the soil with manures after being laid down to grass. Slight as may be my acquaintance with tillage farming, I know too much to go back to the old system of summer fallowing on stiff clay soils; for when a juvenile I have frequently seen Rodger and Jake, two steeds as stout as steel, groan nearly every stride they made in some ploughings when the seasons were unpropitious, and the result be from 10 to 12 bushels of wheat per statute acre, and in a few instances only 6 or 8 were secured, which did not pay for labour, consequently nothing was left for the landlord and tax-collector. I disapprove of filling the poorest land on the farm, but if convenient would take the best for the purpose, which will give treble the return, and be cultivated at less expense. The exhausted fields should be laid down clean and well seeded, and then improved with farm-yard manure and bones, after which they will be adapted either for dairying or feeding. For upwards of thirty years it has been our invariable custom to plough the best land and improve the worst in the manner already stated. On account of not growing any turaijs and mangolds, and but few potatoes, the following method was usually pursued: 1st, oats on leys; 2nd, wheat after pinfallow; 3rd, oats; 4th, clover, which sometimes was mowed twice, on other occasions; once, if only one crop taken, a pinfallow was made, but in either case sown with vheat. After a few years of experience it was found the clovers were not so healthy and strong after three corn crops as four, and by taking another between the clovers produced a good effect. A bean crop might have been grown with advantage in the courses. The young clovers were either manured or dressed over with boiled bones well crushed. After following this method for about twelve years, the land was put down for permanent pasture, well manured and boned, which restored it to its former fertile condition for dairying. Free soils, as a rule, are better adapted for tilling, and do not present so many difficulties to the agriculturist as stiff clays, and roots with advantage may be grown in the courses, and where one acre of the former is in tillage there ought to be three of the latter. Still, Mr. Mechi, with deep ploughings and a large outlay, has overcome difficulties which many others at the present time are not able to surmount. Science of late years has thrown a deal of light on agriculture. It has been proved, by the application of suitable manures to land, it will grow the same grain to an indefinite period without any diminution in the crop. Still it is doubtful, if it pays to incessantly till, as cereals are so exhaustive to the soil. I scarcely need remind you I have stronger predilections for dairying and feeding than tilling; still, if one branch of agriculture is fraught with greater consequences than another, it must be given to the latter. People can live in some way without cows, sheep, and swine, but must drag out a wretched existence if deprived of the staff of life. Wheat is the most valuable article which nature produces, and indispensable for the sustenance of mankind, and while I would freely give place to the cultivator of the soil, still there are other branches in farming husbandry that require application and good management to be successful. To make good cheese and butter there must be good grass, rich milk, and skilful application. The cattle should not be too high bred nor too low. They ought not to be over large nor very small, but characterised for equal proportions, and possess good milking properties. It is not wise to purchase cattle lean of flesh, long in the leg, and contracted in the chest, either for dairying or fattening, and this will apply with equal force to horses, sheep, and swine;

stock round in the rib, thick in the body, and rather short in the leg, are generally hardy in the constitution, will fatten quicker, and pay best for keeping. I would not recommend farmers occupying wet clay lands to purchase large high-bred cattle, partly on account of the additional damage they commit in some seasons, and partly on account of the extra food they require to keep up the condition. They are best adapted for rich alluvial soils and dairies in towns and cities. None of my dairy cattle are beyond a good medium size, and only about one-third reach this standard. Still last season I have made upwards of 4 cwt. of cheese, long weight, per cow, besides supplying the house. I consider four large cows will consume as much food as five moderate ones, but the profits will not be so much, and the risks of keeping greater. To farm successfully we must farm well. Land is honest, and will repay for an outlay. Drain wherever it is required; manure freely; cultivate well, then stocks will thrive and fatten, crops will be luxuriant, milk will be rich, and cheese and butter, with proper management, be good. It is a waste of time to enter upon large poor farms without cash to improve. I should prefer occupying 100 acres of good land to 300 that was exhausted. The expenses of management would be considerably less, the profits greater, and interest on capital not so much. Poor land is ill-adapted for either feeding, dairying, or tilling. Cattle will neither milk nor fatten, and crops are not remunerative. A landlord, destitute of means, with a large poor estate, had better sell a portion to improve the remainder; by doing so he will enrich himself and benefit the community. Tenants with poor farms cannot compete with agricultural produce of other nations. Stock, rents, taxes, and wages are high, and there must be high farming or it will soon become a losing game. To feed to advantage the herbage must be rich, the stock healthy and of good quality, and discriminately bought in and well sold out. Instances have been known when stock were high at spring and low in the autumn, that little or no profit was left for a summer's keep. My feeding is chiefly done through the spring and summer months, and at a small expense in labour. I mostly commence buying stirks about February, and continue to do so through March and April, as my land will bear them, and, when there is a fair bite of grass, fill up with barrens and pick calves out of my own stock, and purchased elsewhere, with a few sheep in some years, when there is an abundance of herbage. Mostly those fit for the butcher are disposed of by the end of September, and such that are adapted for store selected at the close of the year to fill up the places of turn-outs in my own dairy. Since giving up tilling and feeding a little, I have frequently been asked if it paid. My invariable reply up to last summer was it did, but not so well as cheese-making. But in consequence of a change taking place in the cheese-market last season, feeding paid better than if I had realised 80s. per cwt. for my dairy, which was very improbable. I have adopted rather an unusual mode of farming, which would not be for the interests of all to imitate. I neither plough nor rear, but purchase all my straw and corn and cattle for dairying and fattening. In some seasons I am a great gainer by so doing, but in others I lose. The profits on feeding last summer were exceedingly large, but, according to present appearances, will be very small this year, consequently I have bought sparingly for this purpose up to the present time. All kinds of stock fluctuate in price, but none so much as store pigs. Sometimes they will sell for nearly treble their real value—on other occasions for about one-third what they cost in rearing, but the average of seven or ten years will give a profit on breeding pigs. We live in very critical and uncertain times. All descriptions of stock and agricultural produce are alternately high and low, and it is not wise to depend entirely on any single branch of farming husbandry, but make careful and proper divisions, resting assured as seasons revolve and changes take place all in due order will give a proper return. Irrigation is carried on successfully in some places, but instances have been known where it does not pay for the outlay. Liquid manure diluted with water run over the land produces abundant crops; still it is very questionable if the farmer pays for the expense of collecting and carting on at the present high price of labour. Growing early potatoes and other vegetables where land is suitable is highly remunerative, and this class of farmers appear to be on the increase in some parts of Cheshire. Selling milk at 8d. per gallon, especially through the spring and autumn months, is much more preferable to making common

and middle-class cheese at the present time; still, if first qualities can be produced, they will pay better than depriving the farm of such valuable ingredients as milk, butter, and whey. Unless more successful than myself, the more sparing you are in purchasing artificial manures the better. I do not consider guano worth the price now charged. If it could be bought on the same terms as formerly there would be a good return for the outlay. I never considered the best to be worth more than £9 per ton. All phosphates made available to the soil may be generally used freely. They are permanent improvers, and mostly answer well in this county. Farmyard manures are invaluable on all lands, and we should continually seek to augment their fertilising powers by purchasing plenty of feeding stuffs. The using of feeding stuffs, farinaceous foods, and artificial manures have to do more or less with mixed farming. The discrepancies so apparent in the experiments made by the more competent analytical chemists of the day as to the flesh-forming and fattening properties of various feeding stuffs and value as manures bewilder the mind and weaken the confidence of some in these scientific researches. Public opinion is not always right—still, frequently so; and perhaps the marketable value attached to each genuine article is as good a guarantee of its real worth as most analytical investigations. To prove the superiority of one kind of feeding stuff over another, according to vendor's price, extensive experiments should be made on feeding and milking stock of the same age, equal value, and similar breed, and the manures from each spread on equal portions of land in the same field. This would put science to the test, and remove anomalies which now exist. No doubt cakes are better for some purposes than grain, and the latter has the advantage over the former for others: all have a wise and important purpose to serve, and, if discriminately used, will answer the end for which they were given. Stock will shine better, fatten quicker, and be more healthy on a change of food; and mixed feeding is as essential to success as mixed farming. I have tried linseed cake for fattening pigs, but met with small success, and cotton-seed cake well crushed, as it came from the hands of the manufacturer, for manuring, but it proved a failure. Genuine farinaceous foods are serviceable for stock out of health and poor in condition, but there is no necessity for continual use when in a healthy state. About seven years ago, in the presence of several respectable farmers, I separated fifteen pigs, and put nine of equal value in one sty and six in another. All were fed alike, with the exception of nine being put on the prescribed quantity of Simpson's spice. Scarcely any difference was manifest for five or six weeks, at the end of which period the nine did not consume their usual quantity of food, and failed to fatten so quick as the others, and, by the time they were ready for market, only ate the same quantity of meat as the six. The ultimate result was that the nine fed on spice were at the very least two scores lighter than those which had none, and on being killed it was found some of the internal organs were seriously affected. I prefer Tipper's Medicated Mystery to any other yet tried. I might have extended this paper, but consider no good would have resulted therefrom, and your patience might have been drawn upon. I have not noticed the breeding and management of hens, ducks, turkeys, and geese, which are all included in mixed farming, and at times form important items in some annual accounts. Growing fruit, cabbages, beetroot, flax, peas, and vetches, and many other things have not come under consideration, though properly within the denomination of mixed farming, and yield large sums of money to producers. I have not ventured to give an opinion on the best breeds of stock for paying, as no doubt there are good and bad of all kinds, and that, more or less, they are adapted for different districts and various descriptions of soil; consequently each party ought to make such selections that are best suited for the farms they occupy and purposes for which they are intended. I have said but little on the rotation of crops, and whether the four or five-course shift is the best, as circumstances transpire at times which render it difficult to strictly adhere to any prescribed mode, and every practical agriculturist ought to be able to judge what kind of crop will be most remunerative. These are generally matters which I have but an imperfect knowledge of, and deem it prudent to pass them over with this hasty allusion. I have barely touched on butter, and only made some hasty allusion to cheese, two most valuable products, as my object in appearing before you was to chiefly dwell on mixed

farming, as it might be carried out in this country in these precarious times, and urge it upon your attention. You will undoubtedly discover plenty of weak parts in the paper, which you will be able to strengthen and fill up; then the objects of this society will have been promoted, and its members edified and benefited.

The CHAIRMAN characterised the paper as one of great value, being sound in most of its deductions, and practical in its suggestions. As to method, as they all knew, the same could not be pursued generally. Stiff clays and thin soils were very difficult to manage. He knew that from his own experience of stiff soils, and the difficulties had been very great of late with a very wet season, and then very dry weather. This showed the importance of making proper provision for scarce times. He knew some who, when there was a year of plenty, sold off as if there would never be dearth again, and then perhaps the next year run short of hay and have to pay if they had a large stock, perhaps £100 to make up for the deficiency caused by their own imprudence. Having expressed himself as in favour of cross-bred cattle on clayey land, the chairman said that he also had got as much as 4 cwt. of cheese per cow, and besides that, fattened all the calves, and he thought they should all try and not come below that.

Mr. WILD reminded them that in purchasing food for stock they had the manure for the land, and if they did not bring out their stock till the prices were big, as he had done, and sold out, they were benefited in two ways.

Mr. RIGBY said he had been very much interested in listening to the paper, which touched upon so many points that it would be difficult to take them all up. There were two or three, however, with which he was more particularly struck, and he would take them up as they occurred to him. He understood Mr. Aston to advocate manuring on the top, for the purpose of improving the soil, but he (Mr. Rigby) thought the better plan was to manure below the surface. All the manure of the farmyard should, he thought, be ploughed in when the land was being cleaned and cultivated; and perhaps if any manure were put on the top it would be best applied in the form of bones for grass land. Mr. Aston's must be uncommonly good land to get from it three green crops, then red clover, mown twice, then three more green crops, and clover after that again. He thought some word of explanation would have been offered as to how it was helped, so as to bring 4 cwt. of cheese per cow. He (Mr. Rigby) took that to be rather more than the average got in Cheshire, although the chairman said he got it, and his was a poor clay farm, but it might be that there was some virtue in that which produced such a heavy yield of cheese. He was very much interested some time ago by reading an article which was written to show that gold might be got from clay if it were properly, mechanically, and chemically manipulated. If that were true clay farms would rise in the market, and they would if it were possible to get on them a yield of 4 cwt. of cheese per cow; certainly if feeding stuffs were used to do it, it must be pretty good for the millers, and he had nothing to say against that, and it would not only benefit the millers and the country, but the farmers also, more than if they did not use them. Then he very cordially agreed with Mr. Aston that it was much better to take 100 acres of good arable soil with capital than to attempt to farm 300 acres at one-third of the rent and with but little capital. The description of the stock to be put on the farm was admirable. They were to have round barrels, white bosoms, short legs, good proportioned bodies, and in that all would agree with him, particularly too when he said that the stock were to be well selected, well bought, and well sold. That would be the height of wisdom. If they all knew how to do that they would all be successful farmers, and make very considerable profits. Another point in which he differed somewhat from Mr. Aston was as to selling milk off the farm, which he (Mr. Rigby) did not think was necessarily an impoverishment of the laud. It was true that if the milk was used on the farm for the manufacture of cheese and the whey was given to the pigs, a little more manure might be made in that way; but then if they sold the milk well they had the money to buy better manure than they could get from pigs by feeding on whey. He thought they had something to learn in this respect, and they might take a lesson from the farmers in the neighbourhood of London, who had even thought it worth their while to lay lines of rails on

to their farms to get the manure from the city directly upon them; and by so doing they raised fine crops of vegetables and fruit to send back to the city. Then Mr. Aston spoke of experiments, and he (Mr. Rigby) was of opinion that if they experimented more frequently, and on a small scale, they would learn more. This was an age of progress, and if men would succeed they must keep moving, not in the old beaten track of the mill-horse, in a circle, but endeavour to strike out into some path which would be more beneficial to themselves. But at the same time they must keep in mind that the seasons were not all alike, that circumstances changed with the character of the soil; the results of one year might be different from those of the next; so that in trying experiments they required very great patience, a great deal of watchfulness, constant care, with the accurate noting of the effects of each experiment. In other branches of industry—cotton spinning, for instance—a new idea could be tried and reduced to its value at once; and, to some extent, the same was the case with cheese-making; but in agriculture generally they required to watch results, not only for one or two years but for a course of years; and hence he thought it most important—and he wished to get this idea into the minds of farmers—that they should be cautious about stating the results of experiments, and try them carefully before making any great change. If there was to be any extension of mixed farming, they had a great deal to learn from some of their neighbours who, living near large towns, felt more of that stimulating influence which was always felt when among business men. The competition with which farmers living near Manchester or Liverpool had to content was very useful in making them more enterprising, and developing their energies. He was pleased to see that about there they had begun growing potatoes; and he thought they might go further, and, where game was not preserved, as on the forest and about Acton and Weaverham, grow other vegetable crops. He could not see why they should not grow as good cauliflowers, or even asparagus, there, as in the south of England. The other day he was speaking to a gentleman who had sold ten acres of asparagus for £30 an acre. Mr. Howard, M.P. for Bedford, had ten acres of onions, and they had been sold for the almost fabulous price of £30 per acre. Perhaps they might not have land so suitable and the climate was not quite so favourable there; but if their soil was not too light nor too strong, but friable and loamy, he was persuaded that much more might be done for the population, which was taxing our energies to the most. Another way in which that could be done, and he thought his friend Mr. Aston would go with him, was in the greater cultivation of poultry. In poultry farming there was a source of wealth of which they did not think enough. They did not like the hens scratching up the soil just after seeding, and they were too apt to throw the milking stool at them, or perhaps, what was still worse, to fetch out the gun and shoot them. That was a mistake; for if they only laid themselves out for the cultivation of poultry they would find it a source of profit. He would suggest it through the medium of the newspapers that some of the farmers' wives might very well fill up their spare moments by the feeding of poultry, both for food and for the production of eggs, which, if done judiciously, might be very well brought into the market, seeing the high price of butchers' meat. Fruit growing had also been mentioned, and a gentleman from Weaverham told him—perhaps they would set him right if it was not so—that the soil and climate of Acton were particularly favourable to early bearing there; and accordingly many at that place had turned their attention to fruit growing. Mr. Rivers's new plan of growing fruit upon dwarf trees, and lifted every two or three years, did what all vegetable productions would do under similar circumstances, made an effort to continue their species. Some farms perhaps had a sheltered nook and soil well adapted for the growth of fruit trees, and by this new plan orchards might be raised in a few years which would be very productive, and nothing could be more nutritious and wholesome than good fruit. He had read a pamphlet, in which it was stated that no man planted pears because he rarely reaped a crop himself, and the line was quoted—

“If you plant pears you plant for your heirs;”

but by picking a suitable bush you might get a crop of apples and pears very much sooner than by the old-fashioned way. He was satisfied that if some of the young farmers would turn

their attention to this that they might do better than they had ever yet done.

The CHAIRMAN said that orchards upon stiff clayey land would entirely fail, nor would they succeed in producing good crops of corn year by year upon stiff land, as it would become too full of rubbish. He knew that he had made mistakes in endeavouring to cultivate his as if it had been dry land. If clayey land, and the best plan was to have a good deal in grass, but yet he acknowledged that manures had cost him £100 a-year, and if he had not gone to that expense he might as well have given up farming. They would not get on unless the land was moderately good, and there ought to be no poor land except on mountains, but he had seen some in the neighbourhood which was not at all creditable. When he entered on his farm some of the land was not worth 10s. an acre, but it had now become worth 30s. or 40s.; and yet he was told by a judicious friend that if he were offered a farm of stiff clayey land he would not have it, as it would not pay him. It was unwise to plough clayey land year by year, although there was a time when there was what was called old turf; but now, even if that were broken up, by the use of bones and other manures, it would in a very short time indeed be brought to more than its original value.

Mr. WILLIS said as to the cumbersome fences mentioned by Mr. Aston as existing upon many farms, they were a source of great trouble, as they harboured vermin, and were constantly wanting repairs; and at this time when the price of labour was high, and men were scarce, and difficult to obtain, especially in that neighbourhood, he thought they should do all they could to limit the number of their fences, and have the rest of such a nature that they would involve as little expense and yet be as serviceable as possible. He was not much in favour of cutting all the fences close, and he thought at such a time as this that a good fence on the north-east or north-west side of a field would be found very useful in sheltering cattle and sheep from storms and during the night. As to summer fallows they were nearly out of fashion at the present day. He saw one a year ago, when two waggon loads of wheat were got from seven acres, and there was two years' rent and labour to pay for. That land laid down to grass with bones or manure, used judiciously, would have paid better. Mr. Rigby had taken exception to putting farm-yard manures on the top of the soil, but it was his (Mr. Willis's) opinion that when a field had been very much exhausted it was difficult to get good grass without putting manure on the surface, and he believed his experience in that matter would be corroborated by other farmers. If they intended to lay a poor field down for grass, having cleaned it thoroughly and given it an average dressing of farm-yard manure on the top, that would induce the rootlets to send out their fibres in search of sustenance. Mr. Aston had very little sympathy with the use of a great many of the artificial manures now in use, and he (the speaker) hoped that the present system of buying by analyses, under the careful supervision of such an association as the Cheshire Farmers' and others, would lead to the reduction of those establishments which were sending out cheap and questionable substances as manure. As to spica, his experience had not been large. Perhaps in the case of sickness, or when an animal was out of condition, it might be desirable to use spica. As to potato-growing, he believed he had been driven from that, for he had two acres last year, and they lost him a guinea a measure, and he could have bought them for less than half that of Mr. Moreton, Mr. Cross, or any other gentleman. Mr. Aston said he made 4 cwt. of cheese per cow. He (Mr. Willis) never could say that he did; but, then, Mr. Aston farmed his own land, and, if he did not buy artificial foods largely, he bought bone-dust, and he (Mr. Willis) believed that was the grand secret of so much being made per cow. Then he did not say how many cows he kept, and cows were sometimes kept thinly, and then 4 cwt. per cow would not be a great quantity. However, Mr. Aston stocked largely, but, whatever his grazing cattle had, his milking cattle always had enough and to spare. As to fruit-growing, Mr. Willis was disposed to think that that might be more extensively entered into by young agriculturists as a pastime. He made a sort of hobby of it in a small way, having adopted the plan of dwarf stocks, growing pears on the quince, apples on the paradise, cherries on the mahaleb, aloes on the sloe, and so on, and he believed that they might grow fruit profitably on clayey soil if they would exercise a judicious selection in the variety they culti-

vated, and taking care what stocks they bought. It would be foolish to attempt to grow the Ribstone pippin, for instance, on a clayey soil, where the atmosphere was damp; and the great reason why Acton had been so productive in fruit as against Weaverham was because the former lay higher and dryer than the latter. The damp upon the blossom of the trees in early spring was very prejudicial, for however fresh and beautiful the flower might look, when the time for setting came the bloom all fell off and with it the young fruit. Personally, he was much obliged to Mr. Aston for his paper.

Mr. MORETON said that it was not wise to put all their eggs into one basket. He said he was a milk seller, and no advocate for the keeping of pigs for manure, as he rather believed in taking the cows up early in the back end, so as to get a second crop for them.

The CHAIRMAN said that upon his farm of 260 acres they bought their potatoes. Four out of five of the attempts made to grow them had been failures, and they did not grow except on newly broken-up land. After the turf had worn out, it was not desirable to try potatoes. He also referred to what he

called the unnatural practice of turning out cattle on damp, wet nights.

Mr. ASTON then replied, showing where he had been misunderstood, and still maintaining, as many agriculturists did in this country, as in America—the laying of the manure on the surface of the soil for some months before ploughing it under, especially upon exhausted soils. As to succession of corn crops, he said that when he was a boy they used to plough the worst field, but his father found out that that was a mistake, and he was now following in his footsteps. His three first crops were large, the next three good, the next average, and tillage ceased at the end of twelve years, but, then, that land had been lying for 60, 70, or 80 years. He moved a vote of thanks to the Chairman.

Mr. RIGBY, in reply, said he heard two men discussing the question of manuring, and one asked, "If you were hungry, where would you sooner have your food, inside you, or rubbed about your body?" Let them apply that to the land.

The meeting terminated with a vote of thanks to Mr. Aston.

BOROUGHBRIDGE AGRICULTURAL SOCIETY.

STEAM CULTIVATION.

At the last quarterly meeting, Mr. Jacob Smith in the chair,

Mr. STEVENSON said: Probably your worthy vice-chairman, Mr. Scott, thought that I had had more practical experience in steam cultivation in this neighbourhood, and therefore fixed upon me. I had much rather some one else had brought the matter forward, and I have indeed to apologise for the very brief and meagre paper I have written; still I hope it will suffice to raise a good and useful discussion, and elicit something towards what I judge is partly the object of our meeting together to-day, namely—The Introduction of Steam Cultivation into farms in this district. The information I have to give to you may appear rather of a one-sided character, but I can best speak of what I am conversant with, namely, the Roundabout System. I assure you, however, that I speak without prejudice, and I should only be too glad to see steam work more common upon farms. I will allude to the systems in use. First, as to the Rope System, which has so far been the only successful one. I saw this morning one of Thompson's road steamers at work in my own township, and although it did not consolidate the land so much as I expected, and did not satisfy me that it would perform satisfactorily unless the ground was dry and hard, yet I have no right to judge of this from the little it has done, as it has only just started work. The systems of Smith, Fowler, Howard, and latterly Fiskin have shown in the first rank, but that of Fiskin I have not seen at work. I think, however, as far as I can learn, that some of the principles of it are very good. I must now make the remark in passing that traction engines I feel quite confident will never be successful in the working of the soil, and anyone who has seen a traction engine at work this wet spring must have been pretty well satisfied on this point. Secondly, I will speak of the advantages of Steam Cultivation. I feel perfectly sure that no one can doubt the superiority of steam work over that done by horses. The deep and thorough moving of the soil is free from any treading by horses. I know that one steam-smashing cultivator is worth any three horse cultivators; and again, is it not an immense advantage to get a lot, say one hundred acres of the heaviest work done by steam, still keeping your horses fully employed, for we do not keep a more than sufficient stock of horses just to make a push after a fit of bad weather? I think that it is now pretty generally admitted that Mr. Smith's (Woolston) plan of deep smashing and not inverting the soil is the cheapest and most effectual plan, bringing up as it does sufficient subsoil, and not leaving so harsh and cloddy a surface as when the subsoil is all brought to the top. The land is also more easily cleaned, and in fact the couch has no hold. Further than this the land is more level than where a digger is used, and a friend of mine says

where he has used the digger he has a plague of thistles, but where the cultivator or plough was employed there were none. Next as to the cost of work. My experience dates from 1856, when my father purchased a set of the Woolston roundabout tackle. This was worked up to 1867, when a Howard's second-hand windlass was bought with double snatchblock, and a Howard cultivator was added in 1868. I must go a little into detail, but I hope someone present will be able to offer information respecting the implements of Fowler and other makers. Looking over the cost of work I find the prices to be from 3s. 6d. to 6s. 6d. per acre; coal, 1s.; labour 3s.; oil and water, 8d.; removals, 4d.; the average cost of my strong land being 5s. per acre. Where the land is dry and in good working order much more is done than in the case of wet, and with very much less wear of ropes—in fact, when rain sets in "shut up" is my advice. The wear and tear is very small about the exception of ropes, which will amount in cost to about 10l. per acre. Other breakages, &c., 2d. per acre would cover. I come at the wear of rope readily. The seller of the second-hand windlass I spoke of acknowledged that it worked above one thousand acres of very strong land for hire, and it did five hundred acres more at Rainton, the wear and tear being 7½d. per acre. This brings the price up to 6s. per acre. Now it is very evident that the more acres are gone over the less amount per acre goes for renewal of the apparatus, than if the interest of the three sets of engine and tackle represented in such repairs, amounted to an annual sum of £34. This spread over two hundred acres was equal to three shillings per acre to be added, thus making the full amount 9s. per acre. Of course light work could be done for much less. I now come to the saving. My farm at Borea is too far away to work the tackle as well, being light soil. Many of you know the Rainton farm, which is a good deal scattered about. It contains 400 acres of arable land, and extends two and a half miles in length, and therefore it cannot be called a compact farm. Now there is a saving of four horses at least upon this farm, but I do not think that we ought to attempt at reducing the number of horses too much on this scattered farm. There must be an extra amount of cartage of crops and manure, and is not the adoption of steam intended to produce larger crops? It is therefore natural to expect an increase of horsework as well as a saving. On my farm the saving of horseflesh is at least seven horses, but I have calculated it as four, as there is a good deal of chaff-cutting by steam, besides which the grinding is done at home. Steam machinery can be let out on hire. Mr. Stevenson alluded to the cost of steam cultivation as against horses, and showed that steam had the advantage, in the next place remarking: I have said nothing about the hiring system. It will be a good thing in prospect for the farmer if the Steam Cultivating Companies pay their way, but there are

great drawbacks, as they must keep working nearly all the year round. There is consequently a large outlay. There is a difficulty in obtaining the steam plough when the land is in the best condition for working after harvest. Everyone then wants it, but if wet weather it is set to work when the land is not dry enough. I need not tell you what you all know that stubble broken up directly after harvest is a preventive of couch grass, and we must aim at preventing the growth of couch, which causes the annual weeds to vegetate. Now at autumn the clearing of stubbles furthers steam cultivation on strong land, and enables you to grow a crop of some description every year—in fact it does away with dead fallows. I shall be most happy to hear what your ideas are respecting the adoption of steam tillage on your farms. My own opinion is that a set of roundabout tackle will pay where a person occupies 350 acres of arable land. A set of tackle will render you independent of any company, and where there is a steam-thrashing engine and machine on a farm the outlay is not very great to increase the usefulness of the engine. I had hoped to have given you more upon this interesting subject, but I have been disappointed in not procuring some information which I expected and which I had promised, and I now thank you for the attention which you have paid to my observations.

The CHAIRMAN said he regretted that Mr. Stevenson had not obtained the information he sought for, but they were obliged to him for what he had brought forth in his paper. The real question for them to consider was, seeing that steam cultivation was without doubt an excellent thing, how best they could introduce it into that district so well adapted as it was for steam cultivation. What method should they devise for bringing it into practical operation? Would it be the best for three or four farmers of the neighbourhood to unite together and purchase the tackle and all that was required for steam cultivation? Mr. Stevenson, from the experience he had gained, had arrived at a conclusion decidedly in favour of steam cultivation, and therefore he thought they might consider whether it was desirable to join the York and East Riding Company, the North Yorkshire and Durham, or any other similar company, in order that they might have a set of tackle sent down into the district. Letters had been sent to the secretaries of both the companies he had named, but the answers were not satisfactory. The rule was that shares should be taken, and twenty shares would be required in the district. He had no doubt that if they obtained for themselves a set of tackle and made Boroughbridge the centre, that success would attend the step, and in twelve months they would find that there was plenty of work not only for one set but two sets of tackle. Let them make it public that they wanted a set, and he felt sure that there was a sufficient number of enterprising farmers in the district who would be willing to unite in the movement. He saw several gentlemen in the room who had capital, and who had plenty of energy to embark in it.

Mr. SCOTT, the vice-chairman, said that he was ignorant of the working of steam cultivation, although he had seen a little of it at the shows of the Royal Agricultural Society. From what he had heard he had for some time past felt assured that steam cultivation was an excellent mode of working on a farm, and Mr. Stevenson, by calculations he had made, had given them some idea of the cost. For many years experiments had been successfully tried by Mr. Stevenson's father, who was an intelligent and enterprising farmer, and who lived before his day, and, from what had already taken place, and from what was going on at the present time, he felt sure that steam cultivation would come into general adoption by some means or other. He trusted that the ventilation of the subject that day would induce the farmers of the district, at least those who farmed most extensively in the neighbourhood, to take up the subject. He should prefer the farmers themselves dealing practically with the question instead of joining a company, as by purchasing their own tackle and machinery for themselves they would render themselves independent of other parties. He thought that Mr. Stevenson had rather under-estimated the saving with regard to horses, because he considered that the cost price of a pair of horses and the labour was £120, so that by having two pairs of horses less there would be a saving of £240. He hoped that they would not leave a stone unturned in having steam cultivation introduced into the district, which he was convinced would be greatly benefited thereby.

Mr. BUSHELL (York) could well understand why Mr. Stevenson had not over-rated his estimate, as he had put that es-

timate low enough, far too low, from a feeling of delicacy on his part. There had been a great increase in the cost of labour and in the price of horses, but if steam ploughing and cultivation became generally adopted horses could then be purchased at a cheaper rate than at present. The question was whether they would have a set of tackle for their own individual use, or whether they would use it through the medium of a company. He spoke of the different systems of steam cultivation, and then stated that, with regard to the East Riding Company, if the requisite amount was subscribed they would send their tackle into that district as had been done in other cases. In a wet season like the present it was best to let steam cultivation alone, but when a dry time came they could get through an immense amount of work. He pointed out the great importance of having proper men—men of some tact and knowledge to manage the system of steam ploughing, because the great bulk of the smashes, breakages, and mishaps, and consequent large expense, occurred through want of skill and judgment. They must have thoroughly reliable men in charge, or they would find themselves involved in extra cost by breakages, and there would be in addition the loss of time. By the use of steam cultivation a farmer in smashing up immediately after harvest, say one hundred acres, would be enabled to do with two horses less. It was best, when a set of tackle was obtained, to keep it within a certain district. It did the tackle injury when travelling and shaking upon the roads. The tackle was more liable to damage in removal from place to place than by being worked upon a farm. Six miles he considered the maximum that a set of tackle ought to travel. If there were four farmers with one hundred acres of land each for steam cultivation they might keep a set of steam tackle to themselves.

Mr. BENNETT was in favour of steam cultivation, and the question was as to the best method of introducing it into the district. He pointed out some of the difficulties in the way, and named a company at Wakefield with which he had been connected having become involved in considerable loss owing to the mismanagement and carelessness of two men. He believed that under proper care and management steam ploughing would pay, and he was of opinion that the cheapest mode was that recommended by Mr. Stevenson. It might be desirable to form a steam cultivation company, whose operations should be confined to that particular district.

Mr. LOFTHOUSE said that there was a difficulty as to steam cultivation when they had to deal with small fields, as the larger they got the fields the better. He had ploughed about thirty acres at Helderby, and had just caught the land at the proper time of year. He thought a number of farmers in the district might join together to obtain a set of tackle.

Mr. FORD said that he should like to know something as to the cost of preparation. A gentleman in Scotland whom he knew had got a set of Fowler's system, and he was desirous of ascertaining the cost of wear and tear.

Mr. STEVENSON stated that in the roundabout system, which he knew, the cost was not very great, there being only few breakages. In reply to a question from the Rev. R. D. Owen, he said that if one hundred acres were done in the autumn by the steam cultivation it was a great relief, and there would be no difficulty in getting the rest done in the spring.

The CHAIRMAN said if a small company could be formed, consisting of not more than six farmers, he should be glad to join the movement and take shares in proportion to the extent of his farm. If a few others would do the same, they would succeed at once in their object. At the engine they must employ one good man, up to his work, and pay him a liberal wage. When they did not want the use of the tackle themselves, the best way would be to let it out on hire, and in this way make the best use of it they could.

The VICE-CHAIRMAN said that Mr. Lofthouse had alluded to small fields, but he believed that the difficulty could be got over, because landlords now-a-days would readily give leave to stub up hedges that were superfluous, and thus abandon a large number of small fields for a small number of large fields. It was now more necessary than ever to do away with small fields, so that the steam plough could get properly to work. Of course the fields must be made subservient to the improved system of ploughing by steam. Whenever land could be ploughed by steam it would be unwise to use horse power. There were many things in favour of the use of two engines, as there was then only half the wear and tear and very little

waste of steam, and nearly the same amount of fuel was required for one engine as two.

Mr. BUSHELL said if 800 or 1,000 acres were worked it would pay financially if advantage was taken of the work being done at the proper time. It was the best to keep a set of tackle within a circumscribed area, as the wear-and-tear of long travelling on the roads was prevented. He advocated, like the Vice-Chairman, the desirability of not having so many small fields, and gave an instance which had come to his knowledge of four small fields being made into one, by which half an acre of land was gained by doing away with fences. Steam

ploughing would prove a great advantage to the farmers, and if he were a landlord he should feel that a tenant was flattering him, and he should allow him to do what he thought best as to the fences in introducing the use of the steam plough upon the farm.

The CHAIRMAN had no doubt that in five years the fields would be made double the size to what they were at present, and become more productive. The country around Boroughbridge was particularly good for steam cultivation, being of a level character.

A vote of thanks was passed to Mr. Stevenson.

OWNERS AND OCCUPIERS ON THE TRANSFER OF LAND.

Just twenty years since the following resolutions were passed at a meeting of the Farmers' Club on the proposal of a well-known Essex agriculturist, the late Mr. Fisher Hobbs: "That the difficulties attending the transfer of land have generally become so many and embarrassing as to demand the serious attention of the Legislature, with a view to removing them."—"That the effect of these difficulties is in the highest degree injurious to the *owners* of the land, who, encumbered with them, can seldom make the most of their property; to the *cultivators* of it, who are thus too often denied that aid and encouragement in the way of permanent improvements—such as buildings and draining—that should properly come from the landlord; and to the *public* at large, who are consequently deprived of those opportunities for investment, and the advantages of increased production, they would otherwise enjoy." And at a recent meeting of the Essex Chamber of Agriculture, the following resolution was passed: "That the present state of the law as to entail and strict settlement of land discourages the application of capital to the cultivation of the soil, to the great injury of all classes of people, and increases the complication of title, and the expense and delay incident to the transfer of real estate." In his paper, for Mr. Fisher Hobbs had made it his business to call the attention of the Club to the question, he quoted the subjoined from a private letter: "As an instance of the length and expense of conveyances being occasioned by family settlements, I may mention that Mr. — and myself having purchased, last year, a small estate at —, part of the settled estates of the — family, our conveyance exceeds three hundred folios in length; and you may naturally suppose that we should not have a longer conveyance than we could help, the expense coming out of our own pockets. On the other hand, I have made a conveyance of land at — for a sovereign, stamp included."

We have collated thus much to show that the farmers of Essex should be well up in the subject which they have been considering or reconsidering during the last few weeks at the Shire Hall of the county town. The sound conclusion, however, at which the meeting ultimately arrived was by no means a unanimous expression, the discussion gradually resolving itself in something like a battle royal between the owners and the occupiers. An amendment to the original motion was straightway put by Mr. Beaumont, who announced himself as a lawyer and a conveyancer, and whose counter resolution ultimately assumed this form: "That while this Chamber would sanction any change in the law which would facilitate the free transfer, it is *not* of opinion that the law of entail and settlement discourages the application of capital to the soil." And upon this the landed interest spoke out. Colonel Brise, M.P., "warmly supported the amendment, which he trusted would be carried, if not without a division, as a unanimous protest on the part of

the meeting against Mr. Fowler's resolution." Again, "These were the days of abolition. Some there were who wished to abolish the landlords altogether. Others wanted to get rid of the farmers—there was no need of middle men at all—the landlords ought to farm their own estates; while others said get rid of the labourers, and let the farmers do the work." Then, Mr. Wingfield Baker, M.P., submitted with all proper caution, that as one change might entail another, they "had better leave things as they were at present;" and the chairman, Mr. Round, M.P., said, "there were other hindrances to agricultural prosperity besides the law of entail and settlement, for instance, the excessive stamp duties on agricultural leases, the present tenure on copyholds, the defective state of sanitary laws, but principally of all the excessive burdens of local taxation." But the chairman went rather further than this, and rather further than we ever remember to have heard a chairman go before when, in discharge of his duty, he had to submit two motions for the choice of the meeting: "In his opinion the Chamber, formed as it was to promote the interests of all the agricultural classes, ought not to pass any resolution which was not more or less unanimously approved of by both owners and tenants." If this be not telling people to do as they are bid it certainly approaches very closely thereon; and at the best, or the worst, it is manifestly not argument. A Society formed to promote the interests of all the agricultural classes, is, plainly speaking, formed to promote the interests of agriculture without paying any special regard to any one class in particular; or if a Chamber of Agriculture be the instrument of any one body more than another, it is that of the tenants, and not of the landlords. Hence Mr. Round's very obvious mistake, when he sought to rule a majority by a minority.

Then look at the arguments actually advanced. Col. Brise inferred that if the original motion were carried, this would run in a certain direction for abolishing the landlords altogether, and the farmers and the labourers; and as the original motion was carried, naturally the Essex farmers stand committed to the utter demolition of everybody! Of course this sounds very much like sheer nonsense, or as Mr. Johnston put it later on—"Who on earth wants to abolish the landlords? Who wants to abolish the farmers? Who wants to abolish the labourers? It is all *gammor!*" Again, in the face of an amendment which directly admitted the evil, Mr. Wingfield-Baker, a staunch thorough-going Liberal, would prefer leaving things as they are to attempting any change! Only picture any man at an agricultural congress manfully proclaiming that it would be better not to attempt to improve on the cumbersome and barbarous practices under which land is bought and sold! Then the chairman deftly tries to change them on to a fresh fox, such as the stamp duties, copyholds, sanitary laws, and local tax-

ation. Clearly copyholds and heavy stamps are but part and parcel of the same old obsolete iniquitous system protested against; but there is something really amusing in lugging in our sanitary condition at a closely argued debate on the transfer of land; and local taxation is in some people's hands very like King Charles the Martyr in the hands of Mr. Dick. Let him frame and reframe his petition, setting forth his own grievances, how he will, sooner or later the unfortunate King *will* creep into it.

Still at times the discussion was kept more to the point. Thus Mr. Smith, of Saling, "objected to the question being treated as one of occupier against owner, and contended that tenant-farmers had some judgment and knew where the shoe pinched. Much capital had had to be found by the tenant-farmers of this country, which ought to be found by the landlords in improving their buildings, drainage, and other works, capital which might advantageously have been spent in other improvements of the farm." These are all home-truths, as at Maidstone, only last week, we heard a farmer state openly that many of the Kent landlords were unable to set about such work as drainage, and that unless the farmers did this for themselves it would never be done at all. Colonel

Brise, however, asks what has that to do with the law of entail? and Mr. Smith answers, "If the landlord had had power to do entirely what he liked with his property he would improve it. Colonel Brise knew estate after estate where farm buildings were in an unsatisfactory state because of the system of life tenancy." Precisely so; under the present system of settlement and entail, many, very many, landed proprietors are simply embarrassed men from the time they come into quasi-possession of estates which they can do little more than "pass on."

The meeting did *not*, as prompted, protest against Mr. Fowler's resolution denouncing the present state of the law of settlement and entail; and the meeting did *not*, as very broadly hinted it should do, pass a resolution which could command the unanimous approval of everybody. How could it, if it were ever in earnest, and intent on anything more than make-believe? We honestly congratulate the agriculturists of Essex on the firmness with which they stood their ground, for Mr. Fowler's motion was carried by a majority of nearly two to one; but, at the same time, we do not quite see how over this business they are, with the exception of Mr. Johnston, represented in Parliament.

LAND TENURE.

At a meeting of the Ilungerford Chamber of Agriculture, Mr. S. Waldron in the chair,

Mr. STAGG said I think the necessity of long leases and Tenant-Right a very proper subject for our consideration, and with your kind permission I will introduce it by making a few remarks thereon: In farming as in other things many changes have occurred in late years which very materially affect the cultivation and arrangements in farming. We have now available greatly improved implements, artificial manures, and steam ploughs to promote and assist the capability and productivity of the soil, but these new lights (if I may be allowed to use the term) necessarily render a considerable increase of capital to carry on a farm of magnitude profitably, therefore yearly tenants are most disadvantageously situated as to these appliances, as it is but reasonable that a tenant-farmer should have a substantial guarantee as to reap such advantages as might be fairly calculated on. This cannot be obtained in one year's occupation, and shows the necessity of leases or written agreements protecting the interests of the tenant for expenses incurred by permanent improvements or unexhausted artificial manures. Without some substantial guarantee for protection to a tenant, the productive capabilities of the soil cannot be expected to be fully developed. Every practical man knows the benefit of high farming is not, in many particulars, felt the first year, and therefore there is no security to a yearly tenant that he will retain his occupation long enough to derive its benefit. Whether from manures, steam-ploughing, corn or linseed-cake feeding, chalking, road-making, &c., &c., a great disadvantage, as well as loss is experienced by the occupier, and, indirectly, the public are adversely affected by the capabilities of the soil not being fully developed, and the larger produce brought to market. With regard to implements which are now necessary, but very costly, it is a well known fact that a second-hand article, if ever so good, seldom realises anything like its value, so that a tenant who has provided those appliances at his own cost is liable to a serious loss if obliged to relinquish the occupation of a farm, after a short term. I do not mean to imply that an outgoing tenant should be compensated for such by the landlord, but I do think that many misunderstandings which occasion change of tenants would be prevented if written agreements were more generally in existence. And I am of opinion that such agreements should contain clauses to recoup an outgoing tenant for outlay such as unexhausted manures, corn and cake feeding, carriage of materials for erecting new buildings, chalking, draining, and road making. I doubt not

some will think it unnecessary to enter into these particulars, but a careful observer cannot fail to see, and frequently hear of great injustice, occasioned by mistaken confidence. Where so much capital is invested, a simple verbal agreement, even for a yearly tenant, is not a satisfactory holding, or calculated to encourage good farming, however high in repute the proprietor or his agent might be. Caution will, however, at present, I fear, be little attended to; so numerous are applicants for farms, almost any terms are acceded to, regardless of future consequences; nevertheless, sooner or later, overwhelming difficulties are sure to be the result in very many cases of this reckless competition. It cannot be that farming is such a profitable occupation to induce these injudicious bargains. All tenant-farmers, unless especially favoured, know that arable land farming, the past few years, has been anything but remunerative. I believe, taking the three adjoining counties of Wilts, Hants, and Berks, a profit of 5 per cent. on the capital employed has not been realised. I do not wish to dishearten young tenant-farmers, but I must say the future prospects, considering the high rent (no doubt promoted by unwise competition), increased and ever increasing taxes, and parochial rates, increase of outlay for labour, and mechanics' charges—I repeat that the future prospects of farming are anything but promising. We frequently hear it stated the landlord is really the ratepayer; how this statement is in accordance with facts I have yet to learn, for instead of abatements being made for increasing rates, whenever a change in proprietorship or tenancy occurs it is a common practice to have a new survey, ostensibly to adjust the rent equitably with regard to changed circumstances. But whoever heard of a surveyor valuing a farm without setting the rent up? It is a generally understood thing a valuation is intended to increase the rent, which the extraordinary and unaccountable competition for farms encourages. A reaction with regard to such competition might be deferred for a period, but I feel assured that at no distant time such a result will be a fact. No class of men, not even tenant-farmers, will foolishly long continue a profitless occupation, and too many will from necessity relinquish their farms. I believe a great number of tenant-farmers are in a hopeless state of difficulties. It possibly might be inexplicable to many how it is tenants do not at once relinquish unprofitable occupations. A little reflection and inquiry would, I think, demonstrate the fact that too many are similar to a dilapidated building—an occasional propping might keep them up where they are, but a removal would be a "concluding catastrophe." With regard to leases

I think a long one indispensable. A term of eight or ten years is not sufficient, and does not give a tenant scope for his skill and outlay to be remunerated for the following reasons—namely: A farm taken when out of proper tillage would take at least four years to get it in proper working order, and to induce permanent improvements a legal guarantee for a considerable period is undoubtedly necessary. Life with all is uncertain, even the young or middle aged not infrequently, from accident or other unexpected circumstances, die before an opportunity to reap the advantages of improvement has occurred. Under such circumstances a change of tenantry frequently follows, and unless a lease is existing either the

landlord or succeeding tenant reaps the advantages of previous outlay, to the exclusion of the family or surrounding relatives of the departed tenant. When a new survey is made—either in consequence of a change of proprietorship or decease of tenant—the surveyor, as a matter of course, looks to the present condition in every particular, and assesses the rent without reference by whom improvements were made, and thus the skilful improver or his heirs are unjustly treated, and deprived of due recompense for expended capital.

The following motion was carried: "That long leases are most advantageous to both landlord and tenant."

NEWBURY CHAMBER OF AGRICULTURE.

LAND DRAINING.

At a monthly meeting, the Rev. C. W. Everett in the chair, Mr. J. T. CARBONELL read the following paper:

I venture to say a few words on the subject of draining land. The system I adopt is very different from the ordinary one. I am only an amateur drainer, but I am a practical one, and my plan has the sanction of one of the most eminent engineers in this country (Mr. Joseph Quick, engineer to the Grand Junction Water-Works Company, Southwark, Vauxhall, Odessa, and other water-works). I attribute the flooding of land often to the fact that the surface-water is held up because the lower stratum is full of water. Very frequently water from the lower stratum will rise up and cause flooding on the surface. Make an escape from the lower stratum, and then the surface-water will find an outlet. A house by the side of a river generally stands on drier ground than other houses. By constant filtration, the foundation becomes porous, as the lower stratum would become by deep well draining. My plan is to make a hole in a field deeper than any other part of the field—in fact, down to quicksand, if possible; then to fill the hollow with large roots and boughs, and afterwards earth, to the ordinary level of the field. An easy way to get an outlet from the field into the ditch on the other side of the bank is to force an iron pipe through the bank at the proper level: by this means, the water will generally be drawn from every other part of the field through the strata without the aid of pipes. In fact, an artificial swallow is created. In one of my fields water is discharged from one of these holes in sufficient quantity to fill a large lake in a short time. I have several of these deep wells in my fields, and I can prove that they answer perfectly, at what must be a much less expense than laying pipes as is usually done. As a proof of the manner in which water finds its way through the strata, I will mention that there are two breweries in London on opposite sides of the river—Barclay and Perkins' and Calvert's. These breweries cannot pump water on the same day, as one well exhausts the other. Then, again, the well at the Reform Club drew all the water from the well at Her Majesty's Theatre in Pall Mall. If it were requisite to produce further evidence as to water travelling through the strata it would be most easy to do so. Some deep wells made at Sheerness drew the water from the wells on the opposite side of the river at Southend. I contend that if water will travel for a long distance through the strata, even under a river, a very deep dead well will draw water from all parts of the surrounding land. The water falling on the surface, if not kept up as I have explained it sometimes is, will fertilise the land. It is the lower stratum being already charged which keeps up the surface-water, and sours and injures the land. Again, look at the river Mole, in Surrey, which disappears underground, and comes up again several miles from the place where it had been lost sight of. What does this prove but filtration through the strata? There is a law to forbid all towns on the banks of the river Thames from throwing drainage into the river, as it is thereby polluted. This is a very difficult question, and the law is much evaded. As a director on the boards of two London water companies, I have for many years heard much about filtration, and the tendency of water to find the lowest level against all obstacles. A scheme was started the other day. It was proposed to make a large sewage reservoir above the reservoirs of the

Grand Junction Water-Works at Hampton, but about a quarter of a mile from them. Our engineer was much alarmed at this proposal, fearing that although our reservoirs are, and the sewage reservoir was to be, thoroughly cemented and cloyed, there would be danger of our water being contaminated. We petitioned against this scheme in Parliament, and it has been withdrawn (Bazalgette's plan). I only mention this to prove that water will travel through the strata for a long distance, and, in the opinion of a first-rate engineer, it may find its way through cement walls. Some people will say that clay lands cannot be drained by dead wells: I think they can. It depends a good deal on the thickness of the clay. Clay in some places constitutes a very thin stratum—instance at West Drayton. In clay there are always flaws, and these flaws will assist the passage of the water. In travelling through cuttings by the rail, you will often see a section of the strata—clay for a certain distance, then part of gravel and chalk, and you will often observe flaws in the clay leading into gravel or other strata. Suppose a case of a very flat field of the stiffest clay requiring draining. The difficulty of getting a fall is great. This is overcome by making a deep dead well, and draining into it by pipes, should the clay prove to be too thick for the water to filter through the strata. If a side drain cannot be made, the water may be utilised by means of a pump. People sometimes drain away water of which they are much in want afterwards. It may be fortunate sometimes for those who have over-drained their land that their pipes should be stopped up, but it would be better if the water were stored for use, in case of its being required. If one swallow is not sufficient, two or more might be made. I have lately made in a flat field two of these deep holes without pipes, and the result is most satisfactory. When you have once established a great fall, a few pipes may assist in draining the water off the land. I think that all pipes should be perforated, so as to allow the free admission of water, and also that gravel or faggots should in all cases be placed over them to keep them steady. These faggots become after a time retentive of water like a sponge. They decay, but not being exposed to air retain their form, and therefore afford protection to the drains from sand, which would tend to stop up the perforated holes. In fact, as already said, they act like a sponge, and feed the drains. I remember when faggot drains were much in use—they worked well; but how perfect would they have been with perforated pipes under them! Old pipes may be perforated with a drill, and stoppages in drains may be repaired with them. I have heard many say that they were astonished how water can find its way into closed pipes in stiff wet clay. That it does so sometimes there is no doubt; but it is equally certain that the pipes are often stopped up, as when closed pipes are placed close to each other, the joints are very often stopped in clay lands, and the drains become useless. In this neighbourhood I went to see some draining which was being performed by a most eminent drainer. The levels were beautiful, and the arteries leading to the main drain quite perfect. However, I ventured to say to the head man there, "I do not quite understand how water can get into these closed pipes; I think they may be liable to be stopped up in stiff clay, which will cement them together." He answered, "It all depends upon the water; if it be good the

drains will not stop up, if bad they will after a time." When drains are placed close together, if by any chance the least fibre of a root gets in, the warm air inside the drain excites growth. In this country I have frequently seen a long rope of fibres drawn out of drains. Two days ago I was at a place covered with drains on the old principle, and there was a stoppage in one of them. I contend that a stone drain, or a protected perforated drain, would not be so liable to this trouble. What can answer better than the stone drains as now in Ireland? They admit water on all sides. A landed proprietor, who has drained extensively, once said to me, "I cannot deny that I have seen water lying over my pipes, although on the whole I have done good. The springs in Berkshire are often on high ground, which renders the land more easy to drain on any principle, and also makes it more convenient to utilize the water afterwards. Now if people wish to convey water from one place to another without losing any, how do they do it? In closed pipes with closed joints. If it is desired to drain a field, how is it most often, if not always, done? Also with closed pipes; and if the joints are not perfectly closed to begin with, they will inevitably become so in a short time, if they pass through clay. Can these similar plans be right in these two dissimilar cases? I think not. For conveying water the ordinary closed pipes would be good; but for draining land I hope I shall be excused if I say, that it would seem according to common sense to give every facility for water to enter drains; and this is done by perforated pipes. I have heard that filtration through closed pipes will do much. By stuffing a pipe placed upright with clay at the bottom, and filling it with water, you will see the effect. I confess I cannot believe it will be attended with satisfactory results. Pipes in wet clay soon become full of water, and filter no more. I will not detain you much longer; but I hope these few observations may lead to some good result. Some time ago I recommended a gentleman at Woodhay to drain some very flat and wet land with an artificial swallow. He did so, and the result is perfectly satisfactory; his garden, formerly wet, is now quite dry. I believe that if by making a dead well, and

draining into it, we get rid of the difficulty of the want of a fall, a very important improvement in the draining of land is accomplished. I am quite aware that my plan is capable of improvement; for instance, the bottom of my dead well or swallow might be bricked and cemented, so that the water might be retained in a safer manner after the field has been drained to a certain level. When land is over drained, as long as the drains are open, what is the consequence? In a violent rainfall the water is rapidly carried to the rivers, and often floods the lower land. If the storages which I advocate were made, then, at any rate, from the water intercepted, part of the flooding might be prevented, and the water retained for useful purposes. I hope I shall be pardoned for repetition on this point; but after the dry summers we have had my attention has been particularly called to the importance of storing water. Seeing it believing they say. I invite anyone to look at some meadows I occupy, formerly sour and full of rushes, which are at the present time in excellent order. This is the result of dead well draining. Some might say that this is not a new plan. It may not be quite so. I have done draining in this way for years past. I have shown the outlets from my dead wells to many persons, some of whom may be in this room at the present time. Of this one thing I am quite certain, that it was new to the professional drainer to whom I have alluded, when he was laying his drains some time since. I asked him, and he told me that he never turned his drains into dead wells. I hope I may be excused incoherencies in this paper. My desire is to point out a much cheaper and more efficient mode of draining than that usually acted upon; although of course I do so with due deference to the opinions of those who have been long draining on the old system.

In the discussion which ensued it appeared to be the opinion of most of the speakers, that although Mr. Carbonell's plan might be adopted with advantage in peculiar cases, it was not such as could be acted upon generally.

A vote of thanks was passed to Mr. Carbonell, and the meeting separated.

LAVENHAM FARMERS' CLUB.

ARTHUR YOUNG.

At the last meeting, Mr. W. Biddell in the chair, Mr. RAYNBIRD, of Hengrave, read a paper on Arthur Young and his Services to Agriculture, with a Comparison of the Agriculture of his days and our own.

Mr. RAYNBIRD said: Arthur Young's writings, compiled or original, approximate in volumes or tracts to a century in number, and the period of time over which his manifold toils extended amounted to half a century, commencing in 1767, a period of low though natural prices, extending over the American, and then, with an interval of peace, over the long French war, with its paper-money, its heavy taxation, and its high prices, and concluding shortly after this war's termination. The small village of Bradfield Combust, or Burnt Bradfield, would ever be noted as containing the family residence of Arthur Young; as the place where both his early and his principal years were spent; the spot from which he proceeded on his tours, and dated most of his numerous works; where his pupils and his friends assembled; and finally, where he died, at the ripe age of 79, and was buried. The rambling old hall had been pulled down, and a handsome manor-house had taken its place. The hall contained many relics of its old master, not the least important of which was a library of 5,000 vols. and a complete set of his works, the most interesting of these being a collection of original letters, written to him by agriculturists and men of position, contained in ten thick volumes; and a vast collection of MSS., experiments original and selected, contained in twelve very thick folios. The Church contained many monuments to the Young family, and in the Churchyard was a plain monument bearing the inscription:

Let every real patriot shed a tear,

For genius, talents, worth lies buried here.

Young must have been put to the Lavenham Grammar School

in 1746 or the following year, the Master being the Rev. John Coulter. In a quotation from Young's own MSS. was the following: "The latter years of the time, I had a pointer and a gun, and went out often with Mr. Coulter, he with a partridge-net and I with my gun. I had also a room entirely to myself, and a neat collection of books; and I remember beginning to write a history of England, thinking that I could make a good one out of several others. How early began my literary follies!" Young made a six week's tour through the Southern Counties, an Eastern tour—the last and best of the home tours—an Irish tour in 1776 and 1777, and the French tour, published in 1792, on which a curious paragraph showed that what was considered the triumphs of modern science was not quite a novel idea in reference to the electric telegraph. "The Annals of Agriculture," which extended to 46 vols., or from 1784 to 1809, was a work of considerable interest to a Suffolk man. Started just after a peace that had cost us our most valued possession (America), one object, as stated in the introduction, was to propose a plan of home colonisation on the wastes of England, amounting, he stated, to eight millions in England, and five in Scotland, settling on them the old discharged soldiers and sailors, giving them there small tracts of soil as freehold, and paying the expense of cheaply settling them on it. We should thus, he argued, have colonies which would increase our strength and riches without the danger of revolt, and he quoted the example of Sir W. Osborne, of Clonmel, in Ireland, who had successfully settled poor on his mountain wastes in a similar manner; he adds: "'I wish I was a king,' said a farmer's boy. 'Why, what you do if you was a king?' 'I would swing upon the gate and eat bacon all the day long.' So I also may wish that I was a king, if I did it would be for the pleasure of executing such a plan as this for a personal amusement.'" The annals

were even now capital reading; forget that they are old, and you will soon feel interested in them. And many of the facts relative to cultivation and stock management were as good as new, or even better. The machines, of course, are obsolete, but it was amusing to see how varieties of reaping machines, thrashing machines, and drills are named, which are now wholly superseded, but which prove that there was a desire to invent, only the hour and the man were not come. One special good feature in the *Annals* is that there are no anonymous correspondents. It was a question whether an agricultural periodical of the present day could get so good a staff of unpaid and enthusiastic contributors. First in rank comes George III. (Farmer George), who sent communications under the name of his bailiff, Ralph Robinson. Next, a host, in himself, came Arthur Young. Many of Young's papers in these *Annals* would supply first-rate subjects for our Farmers' Clubs. There is one especially interesting, "On the Pleasures of Agriculture." In 1770, Arthur Young published "A Course of Experimental Husbandry," containing an exact register of all the business transacted during five years, on nearly 300 acres of various soils, the whole demonstrated in 2,000 original experiments. This work was too hastily written, though it contained much valuable matter, and in his latter years Young made a point of destroying every copy that he could get in his possession; hence its scarcity. Young, in this work appears to have made every operation on his farm an experiment. One consequence of the success of Young's tours and travels was of great importance to the country, and of considerable pecuniary benefits to himself. The Board of Agriculture and of Internal Improvement was established in August, 1793, and Mr. Young was appointed secretary, which post he held nearly to the time of his death. Seventy-two volumes of county reports, a foreign and national correspondence, premiums of valuable treatises, rewards for important discoveries, and a correspondence and connexion with numerous local societies, were the important results of the Board being constituted. Of the reports, Young wrote the first, that of the county of Suffolk, and in succession those of Lincoln, Norfolk, Hertford, Essex, and Oxford. He also delivered lectures before them on the Application of Manures and the Improvement of Waste Lands. The dissemination of improved methods over the whole country, and a rapid increase in national productiveness, were amongst the benefits derived, stimulated as no doubt such improvements were by the high price of agricultural produce. When Young could no longer carry on the office of secretary, the Board itself lapsed. Having shown that in the celebrated pamphlet, "The Example of France a Warning to Britain," published in 1793, Young first recommended what he called a horse militia, a force, afterwards called yeomanry cavalry, Mr. Ruybird proceeded to remark that the good opinion of our neighbours or countrymen might be prejudiced or partial, but that of foreigners, who have to overcome many obstacles, before seeing with our eyes, was a sure test of the eminence and talent of the person giving it. No agricultural writer has succeeded in doing this to such an extent as Young. He was honorary member of most of the foreign agricultural societies, and his works were translated into French, and published at Paris in 1801. About 1772, Prince Polemkin, the Russian prime minister, sent three young Russians to be instructed by Mr. Young in the arts of husbandry; and in the following year the Empress Catherine presented him, through the hands of her ambassador, with a magnificent gold snuffbox and two rich ermine cloaks, designed as gifts to his wife and daughter. In 1803, the King of Naples sent a Neapolitan for the same purpose, and shortly after the Russian pupils, the two sons of the Duke de Liaucourt, accompanied by a Mons. Lazouski. In 1804, Young received the present of a snuffbox from Count Rostopchin, the celebrated governor of Moscow, turned by himself out of a block of oak, richly studded with diamonds, and bearing a motto in Russian language, which signifies, "From a Pupil to his Master," thereby attesting the great services which he had derived from the writings and practices of Mr. Young. It is reported that on one occasion the Duke of Bedford breakfasted at Bradfield, and was met by pupils from Russia, France, America, Naples, Poland, Sicily, and Portugal. Young had the talent of inspiring his pupils with his own enthusiasm for agriculture, and these must have aided in disseminating British ideas, and a desire of purchasing British implements and stock throughout the Continent. The reclamation and cultivation of

a large tract of waste land was a favourite idea with Arthur Young, which, however, he never was able to realise. And what profit must have resulted from following of his advice of the four-course rotation, then almost confined to our eastern counties, or of the substitution of fallow crops for the bare fallows, or the enclosure of waste lands? I do not say that Young's enthusiasm did not sometimes lead him into errors. Like all of us, he was apt to look upon new inventions and new ideas (especially if they were his own) with too practical an eye. Thus, chichory for sheep feed could not be got to extend much further than East Suffolk. But what we in Suffolk ought to be grateful for is that from his labours, his residence, and his partiality to the country, he has aided not only in placing its character in a high position as an agricultural district, but from his estimation abroad, where he was quite as much appreciated as at home, his approbation of our modes of cultivation and of our stock led, through his pupils and correspondence, no doubt in a great measure to that foreign business in farm machinery and stock which has been so profitable to the country. In practical points of cultivation I can only add that every improvement was advocated by him as it arose, and that the germs, to say the least of it, of most of our modern ideas and inventions are to be found in his works. A young man born in England in these days of steam and progress, can hardly believe that there was a time when in central Suffolk half the land was in pasture and great numbers of cows kept; and in West Suffolk the lands were unenclosed, and for a great proportion sheep walks, heaths, and warrens; when turnips were little grown; when the wheat was all reaped, and as the cultivation increased gangs of Irish were obliged to be engaged; when a drill was unknown, and the broadcast system universal, a drill-plough being the first modest attempt at cultivating in rows; when the horsekeepers and boys lived in the farm-house; when thrashing by flail was the only method known, and the principal employment for winter; when, wonderful to relate, our dairy maids could milk and our spinsters could spin; and when the roads on our heavy lands were all mud in wet weather, and our light lands all dust in dry, so that the now obsolete system of quartering was necessary to avoid ruts; when there was no railroad, no steam, no gas, no lucifer matches, and the mistress of the house called up her maids at such unearthly hours as would now excite a rebellion, her calls being followed by the clink of the tinder-box and the powerful odour of the sulphur match. We have changed all that. We now drill all crops, thrash by steam, cut down our wheat by horse-power, our roads are good, our railways have spoilt people for the long journeys by gig or horseback which Young delighted in. Waste land is enclosed, and the wide spaces by the road sides, as are also what many regret—most of the village greens; our live stock has completely changed, our Suffolk horse is a very different animal to the little Sorrel Punch, whose thick cob-shape gave rise to his name; the cows have changed their colour—no longer Suffolk duns, but beautiful Devon red; in pigs our Stearn and Sexton have made great improvement; in sheep the old Suffolks have wholly disappeared, the partial descendants being quite different in appearance; and in implements there has been a complete revolution, for instead of the simple production of the village blacksmith and wheelwright we have articles so complicated that they are beyond their power even to repair; artificial manures and artificial foods are also wholly modern; in short we economise the land closer, we employ more labour, and bring our animals to market earlier, we produce far more corn and green crops on what our forefathers left waste, but do we make more profit than they did? I fancy we make far less. We buy our crops too dear. Rents are quite double on good lands, and on some light soils probably four times what they were a century back. It is true we have not a supply of meat at 4d. per lb. as in 1770, neither can we get our labourers at 7s. a week, nor our domestic at £2 10s. or £3 per annum.

Mr. HAWKINS said that under the system of free trade, if there was not more corn grown than formerly, we should be still more dependent upon foreign nations. Should anything happen such as a war with America, or any other country from which we have been in the habit of drawing large supplies, we must be in a sad predicament if there were not larger productions at home. We had come to a time when farm labourers were not satisfied with the remuneration they received. Farmers did their utmost to meet the expenses with

which they had to contend. The outgoings were very heavy, and they had much to contend with, in order to maintain their proper position. There were now strikes by farm labourers in different parts of England, and in reference to this matter, he must say he did not think the press of this country had adopted the course it ought to have done. A much too stringent view of the matter had been taken by the press, the labourers being, in fact, rather encouraged than otherwise to make strikes. The labourers were undoubtedly quite right in striking for an advance of wages, if they thought it was to their interest to do so, but he did not think that the press was quite consistent in taking up the matter in the manner that it had done, and—

Mr. T. P. HITCHCOCK suggested whether this was not a subject best left alone on this occasion.

The CHAIRMAN concurred in the suggestion.

Mr. T. P. HITCHCOCK said that he was exceedingly glad that he did not live in the days of Arthur Young. It was all very well to talk about high war prices for corn. The golden age for the farmers was, perhaps, from 1801 to 1814; but the farmers of the present day had resources that were not known in the times of Young. He (Mr. Hitchcock) did not think that free-trade then meant what it did now. There were no Corn-laws in those days. Young was, no doubt, a free-trader in the sense that he was an exporter of the farmer's produce, and that was, undoubtedly, what he meant by free-trade. If he had looked at the subject as a manufacturer, he might then have been a protectionist. No reference had been made to the question of the growth of the sugar-beet. Some might, perhaps, think that this was not an improvement; but it was one of the signs of the times, and he could not help thinking that it was a step in the path of progress. He held in his hand a paper which gave the number of acres of sugar-beet which was grown in different countries, and the money that was realized thereby. He found that there were 356,000 acres in France, and in Austria 315,000. These figures represented several millions of money, and he thought this was a branch of agriculture that was little thought of in Young's time even abroad. At all events there was none of the beet grown in England, and it was not grown to anything like the extent it was abroad. He (Mr. Hitchcock) thought this an important matter, for it was impossible to tell

how long the price of corn might remain what it now was. As to the labour question, he was reading an article the other day on the Italian agriculture, and he found that the best labourers only received 1s. 4d. per day. Remarks were often made as to how much better off the labourers would be if they were to leave this country and go to others. It was all humbug. He recently had some conversation with a person who said he came from a country where he could get a whole sheep with the wool off for 1s. 6d., where beef and mutton only fetched 2d. per lb. In Australia, this individual said, the population was so great that thousands of people were almost starving, even with meat at that low price. If these facts were better understood we should hear less about emigrating to foreign countries, and a high rate of wage.

The CHAIRMAN said there was no doubt but the writings of Arthur Young were the means of inducing many gentlemen of high position to look into agriculture and become amateurs at it. His (Mr. Biddell's) opinion was that the greater the number of influential gentlemen who farmed, the greater would be the benefit to the farmer, for they then found out what were really the profits of agriculturists, and what their estates could pay. A gentleman who farmed his land himself knew very much better what was the real value of land than those who heard of nothing but ideal profits. One prominent and pleasing feature of Young's writings was his thorough candour and truthfulness. He (the Chairman) only wished the same thing was apparent amongst what were termed the writing agriculturists of the present day. That was, however, a character most noticeable in many cases by its absence. If Young was not a good practical farmer, no one could dispute but what he was an instructive one. We were apt in the present day to think that nobody did good except the successful farmers. The fact was, however, that they as farmers received quite as much benefit in observing failures, as they did in observing successful experiments. He (Mr. Biddell) had himself tried experiments, which he should have been rejoiced to have had his neighbour over the hedge have tried before him.

A vote of thanks to Mr. Raynbird for his paper, and to Mr. Biddell for presiding, brought the public proceedings to a close; the private discussion which followed turning upon the question of the strikes amongst agricultural labourers.

THE IMPORTATION OF CATTLE AND SHEEP.

A deputation of cattle-dealers and others from the North of England has waited upon Mr. W. E. Forster, at the Privy Council Office, to urge the removal of the restrictions which now lie upon the importations of sheep and cattle into this country. The members of Parliament present were Sir T. Bazley, Mr. Jacob Bright, Mr. T. B. Potter, Mr. R. N. Phillips, Col. Akroyd, Col. Gray, Mr. Birley, Mr. Lancaster, and Mr. Scourfield. The deputation, which represented the Northern and Midland Counties Salesmen and Butchers' Union, consisted of Messrs. James S. Brown, chairman of association; Joseph Greaves, treasurer of association; Thomas Greatrix, vice-chairman; John Price, Mark Price, secretary, Manchester; John Whitehead, chairman of Northern Midland Counties Butchers' Association; John Child, hon. secretary of the Leeds Association; Ben. Leathby, acting secretary of the Leeds Association; John R. Smith, Leeds; George Woodcock, chairman of Butchers' Association, Sheffield; James Kenyon, Hy. Briercliffe, secretary of association, Bolton; M. Booth, secretary of association, Halifax; Wm. Emmott, vice-chairman of association, Oldham; Thomas Swain, secretary of association, Barnsley; Wm. Hanson, Thomas McCleron, Stockport; Thos. Wood, chairman of association, and R. Burton, vice-chairman of association, Wigan.

While the deputation waited for the Vice-President, Sir T. Bazley, arguing that for the future we should have to depend largely upon our meat supplies from foreign countries, recommended the members of the deputation to teach their sons Spanish, German, and other continental languages.

Mr. JACOB BRIGHT, M.P., in introducing the deputation, said the gentlemen present had come from the great northern towns on the same errand as had brought them there many

times before. They had a strong belief that some of the restrictions on the importations of sheep and cattle were unnecessary, and that in consequence the prices of food were so enormous that a different course must be taken in the future. There were a number of memorials from large towns, and one of them, which might be taken as a sample of the rest, was from Leeds. This memorial objected to the compulsory retention of cargoes of healthy stock, especially sheep, at the ports of landing, and then compulsory slaughter. It asked that none but diseased animals should be destroyed. There were many thousands of sheep in Germany waiting for transit to the English markets, but which the dealers would not forward until fairer regulations were made. This compulsory slaughter of cattle, indeed, amounted to a prohibition on the trade. It therefore prayed the Government to remove the present embargo on live foreign stock, and thus make living more easy to the labouring classes.

Mr. MARK PRICE explained the views of the deputation. The lessening of the restrictions which the deputations asked was but a matter of justice. Twelve months ago they had been promised relief, but, instead, increased restrictions had been placed on the importation of sheep. During the past year there was a falling off in the number of sheep in the country of 1,280,000 sheep, on account of these restrictions. We were paying a price for mutton such as no living man could remember in this country; and this ought not to be the case, because there were sheep waiting to come here could it be made worth the while of the sellers to send them. In the Manchester market last year Manchester was receiving from 2,000 to 5,000 foreign sheep per week, and mutton was 10d. per pound in the wool. In consequence of the restrictions

imposed by the Order in Council, dated the 20th December, 1871, the price of mutton now was from 12½d. to 13d. per pound. The difficulty could be got over if, in the Northern ports, as in London, there was practically a free entry. The deputation asked the Government to remove the bad sheep by all means, and allow the others to go forward for immediate slaughter. The people believed that the House of Commons was overborne by the landed interest, and that for this reason these oppressive restrictions existed. He contended that there was no such thing as mouth disease in sheep, and that thousands of sheep were allowed to come into London suffering from foot disease, whereas they would have been condemned in the northern ports. He asked that the same liberty should be allowed in the importation of German as Irish sheep.

Mr. LEATHBY, of Leeds, contended that there had been a decrease of 4,000,000 in the importation of sheep into this country during the last four years.

Memorials were presented by Mr. Brown, of Manchester; Mr. Hanson, of Stockport; Mr. Emmers, of Ashton; and Mr. Greaves, of Liverpool.

Mr. FORSTER, in reply, said it was exceedingly painful to him to have to receive deputations with regard to any restrictions upon trade, especially when they applied to a supply of food to the masses of the community, and he had never had to do anything officially more unpleasant than to maintain or defend restrictions. Remarks had been made as to pressure from the agriculturists and landowners, but he must ask the deputation to believe from him that no pressure of that kind had, to his knowledge, had the slightest effect upon the Government or himself. The sole object they had in view was to maintain no restrictions except what were necessary for the prevention of disease; and, however much they might differ from him as to the advisability of those restrictions, they must agree with him upon the main principle, because when it was said all that was possible must be done to bring food to the people, they would not be doing that if they spread disease in the home market. The memorials were against an order which said that if in any cargo there were diseased animals the whole of the cargo should be slaughtered at the port of landing. Mr. Price was hardly correct when he said a difference was made between London and the northern ports, or, if he was, it was because the Government orders were not obeyed. He would take care inquiries should be made in consequence of Mr. Price's statement. The representations of the deputation should be duly considered, but he wanted to tell them why the order was enforced. It was true the foot-and-mouth disease did not depend upon foreign imports, although the agricultural interests maintained that it did; but there could be no doubt that every animal that had the disease was a centre of infection. It was absolutely necessary to have restrictions upon foreign imports. When the deputation complained of slaughtering a whole cargo, he would tell them he had had to resist very strong pressure and very strong arguments that all cargoes landing in foreign ports should be killed, because of the extreme probability that there would be disease. If foreign dealers knew there was a market to which they could send animals which they feared were diseased out of their own country, that market would get them. However, he would bring the matter before the Earl of Ripon and consider the grounds of the Order in Council carefully, although he could not hold out any expectation of altering it. He would undertake to say that as far as the central department could secure it they would receive the same treatment in the north as in other parts of the kingdom.

Mr. WOODCOCK said if they were only to have restrictions taken off when the country was free from disease, they would never have them removed.

Mr. FORSTER was bound to say he saw no hope of stamping out the foot-and-mouth disease. The foot-and-mouth disease had given him more trouble than anything else he had had in his life. There were periodical rushes of foot-and-mouth disease, and much stronger restrictions had been called for than had been complained of by the deputation.

Mr. GELES asked why healthy sheep could not be brought from Hull direct to Leeds or Manchester.

Mr. FORSTER said the only answer he could make to that was the answer which applied to the import of German cattle. He did not believe it would be possible to isolate the markets. In the first place, there would have to be restrictions which would be loudly complained of, and it would be difficult to find police arrangements that would make the restrictions effective. There was no middle course between slaughtering all the animals on landing or free transit.

Mr. GREAVES said the Mayor of Manchester had provided public abattoirs, and would undertake to receive cattle direct, and slaughter them.

Mr. FORSTER said we were no doubt in danger of cattle-plague every day, for it was raging badly in France and other places. His belief was that very much the same causes were at work on the Continent as here. As to the rise in the price of meat, he was not prepared to admit that altogether the price of meat was higher. We got from Germany what she imported, and the real chance of an increase of supply would be to open the Steppe country to the east of Germany. If this could be done safely, no doubt there would be a great increase of imports, and consequent diminution of price until the cattle-plague came with them. They durst not allow the cattle to come from Germany until they had security with regard to the Steppe cattle, because Holland prohibited the importation of cattle. Slesvig-Holstein was free from disease, and if it suited the German Government to draw a line, cutting that province off from the rest of Germany, all might be well; but he was not surprised to find that it did not suit the German Government. Dr. Williams had lately attended the conference at Vienna on behalf of the English Government, and it would not be their fault if something did not come of it.

Sir THOMAS BAZLEY submitted that as from time immemorial we had been accustomed to a bonded system in port, the Government should take into consideration the possibility of a system under which cattle should travel under bond from port to port. This, he believed, could be done without any danger. No doubt the prosperity of the country was leading to a large consumption of animal food; but within half-a-century the population of this country had doubled. If we went on at this rate of increase, what the people were to subsist on was a most alarming consideration. We must have the removal of all obstacles on the part of the Government, and, on the other hand, individual efforts must keep pace with the necessity of the times.

Mr. FORSTER said he must again repeat that there was great difficulty in making arrangements that would be effective.

Mr. JACOB BRIGHT urged that some trial should be allowed with one town or a few towns. The railways and the authorities of the town were willing to co-operate, and it was his opinion that a limited trial would be of much effect.

Mr. FORSTER again promised the deputation to go most carefully into the whole question.

I X W O R T H F A R M E R S ' C L U B .

THE APPLICATION OF MANURES.

At the April meeting, for the purpose of hearing a lecture by Dr. Albert J. Bernays on 'The Application of Manures, illustrated by experiments, there was rather a larger attendance than usual, Mr. P. Huddleston, vice-president, in the chair.

Dr. BERNAYS commenced by saying that all the substances that we had were either burnt or unburnt, and there were some that were even unburnable, and that was a fact which must be taken into consideration in the application of

manures, and whilst considering the several kinds of artificial manures it should be borne in mind that farmyard manure was the basis of all good farming. He then proceeded to illustrate the difference between the several kinds by platinum, which he said was unburnable, by magnesium, which, as is well known, produces a strong and brilliant flame, and zinc, which when once burnt had no longer any force in it. Potassium, grains of which burn and sparkle when thrown into

water, was a substance he explained, which was to be found in farmyard manure, more especially in urine. The burning of a piece of common straw, he said, showed from the ash that it contained certain mineral properties which it had obtained from the soil. There was also a good deal of hydrogen in straw. Wood partook considerably of the nature of straw, for when once it was burnt it could not be burnt again. The chief part of the ash of the wood consisted of potash, of which about seventy per cent. was contained in farmyard manure. Farmyard manure was composed of two substances, known as organic, the part which could be burnt, and inorganic the part which could not be burnt. The principal element of all organic matter was carbon, or what was known by the more common name of charcoal. Carbon was a very combustible material, but it required to be heated to redness before it would burn. It would burn much better in oxygen than it would in air, and from its admixture therewith formed carbonic acid. They were not to suppose that because his experiments were made in flasks and retorts they did not pass through those stages themselves in the open air. They did it there, and did it on a much larger scale than it was possible for him to do it, and in the earth it was done even better than in air. The result of the burning of wood would be similar to charcoal; that also burnt better in oxygen than it did in air, as in the air it became mixed with hydrogen. That carbon which he had shown to them was contained in farmyard manure and also in human manure, but in superphosphate of lime and nitrate of soda it was wanting. Common loaf sugar contained carbon, hydrogen, and oxygen; the latter in the same proportions that they were contained in water. If the watery properties of the sugar were drawn away, and a simple addition made to it in the form of a few drops of sulphuric acid, the sugar was immediately turned into a mass of charcoal, or carbon and water. When they had to do with root crops, such as mangel, and those which in the course of a few hours absorbed a large quantity of water, and which produced as a consequence great changes; when not supplied with ammonia, the assimilation of the carbon seemed to be stopped, so as to give a small or poor crop. Those were facts which the experience of Mr. J. B. LAWS and Dr. Gilbert had sufficiently proved. Nitrogen was a necessary constituent in the application of manure, and it was no good manure which did not contain it. Farmyard manure contained it, but not always in sufficient quantities for the requirements of the land, and many changes made farmyard manure quite different from what it ought to be. The lecturer then explained, by means of various experiments, what were the properties of ammonia, and to what process the farmyard manure should be subjected if the farmer wanted to get the largest quantity of ammonia from it that it was capable of producing. It was very expensive to purchase by itself, and therefore, if the farmyard manure contained it, it was very important to them that they should keep it in. The great feature of ammonia, he explained, was its solubility in water, which he demonstrated by an interesting experiment. They ought to guard against the loss of these properties in the farmyard manure, which resulted from its exposure to the air and rain. By so exposing it some of the most important constituents in it evaporated, and were washed away. It was a well-known fact that there was considerably more ammonia in well-rotted dung than in fresh. The consumption of 40 tons of the best oilcake would only yield 10 tons of manure, and they could buy for the same money 30 tons of guano. It was to a great extent a matter of price how those things were to be supplied. One great point which they ought to consider was the unequal distribution of manure. There was but one manure in former days—farmyard manure—and there was no such opinions prevailing as there were at the present day, owing to the use of certain artificial manures. For the growth of mangolds, peas, and beans, farmyard manure was the only one that was worth a moment's consideration. Light soils, on which farmyard manure was the best, should be devoted to wheat, and heavier lands to mangolds. With respect to sulphate of ammonia, he said that any one might prove the purity of it by placing it in a glass tube and heating it through the tube. If it was pure it would volatilize, but if mixed with salt the pure material separated from the salt on this test being applied. That showed that it was a volatile manure, and if it was volatile it must of necessity contain ammonia. A drop of water placed upon a small quantity of sulphate of ammonia, with the addition of a

little lime, would give off a strong smell of ammonia. Sulphate of ammonia was one of the most valuable manures. It was very often a question as to which would be the best to take, nitrate of soda or phosphate of ammonia. Nitrate of soda should also be soluble in water if it was pure. The only adulteration in it, however, was common salt, and the best detector of it was nitrate of silver. Salt was, he granted, a very valuable manure, but he thought they would prefer to mix it for themselves. Let them try salt if they wanted it, but they did not want to give the price of nitrate of soda for it. In the compost heap they had a good method of getting nitrogenized constituents for the soil, and they got them sometimes in the form of nitric acid. As for phosphate of lime, unless they could by some process render it soluble, they had to wait for the decay before the plant was capable of taking it up; but chemistry did that for them in the so-called superphosphate of lime. The great thing was to furnish to the plant the proper kind of food. For instance, if they watered geraniums with nitrate of soda after they had begun to flower, they did so more abundantly, but if they watered them before there were any signs of flowering, they would get nothing but leaves. That was an example of the many things to be learnt in these matters. Superphosphate which was made from bones was much better than that which was made from coprolites, and that consideration ought to rule the price of it. Peruvian guano was capable of yielding the ingredients of ammonia and also phosphates, and if they bore that in mind, it was very easy to see the use to which guano could be put. Salt was a compound of sodium and chlorine, and when applied to plants caused very rapid growth. Mangels benefited by it more than anything else. In plants with big leaves it produced a very rapid circulation of the sap. After dressing in the early part of the year with nitrate of soda, they would generally find that their money came back to them with a very good percentage. Manure was almost a necessity for the root crops; indeed to attempt to grow mangel without manure was simply money thrown away; they required the best manure. There were cases in which it became necessary to make use of something in addition to the heavy dressing of manure which they might have given. They often had not the amount of water that they ought to have. It came all at one time, and then they did not get any of it. The use of superphosphate placed the crops beyond the reach of wire-worm, and rapidly brought them to maturity. If they wanted turnips for instance, to linger in their growth they should use nitrogenized manure, but if they desired a contrary effect they should use a manure like superphosphate, which should be drilled in with the seed. For potatoes he thought the best plan would be to use farmyard manure in the autumn and plant the potatoes in the spring. From the remarks which he had made, he thought they would see that artificial manures should be looked upon rather as aids to the natural manures, for he believed they were all agreed that farm-yard manure was their sheet-anchor.

Mr. FISON asked what was the best substitute for Peruvian guano, as at present constituted, as a top-dressing in the spring?

Dr. BERNAYS thought nitrate of soda, or sulphate of ammonia mixed with superphosphate.

Mr. PETO said the lecturer had not mentioned the manure from rapecake, which was much used in the neighbourhood for corn crops.

Dr. BERNAYS said that would come under the head of nitrogenized manures—a very valuable one, and one which would yield a very large quantity of ammonia. It would be very good to apply in the autumn.

The CHAUKMAN agreed that farmyard manure was the best manure for farmers, and that all those new-fangled manures were only subsidiary.

Dr. SHORT asked what proportion of coprolite it was necessary to use to the acid and the bones.

Dr. BERNAYS said about two-thirds bones and one-third coprolite.

Mr. FISON thought that bone phosphate must be immeasurably cheaper to the farmer.

Mr. MANFIELD thought they were greatly indebted to Dr. Bernays for his able lecture, and also to chemistry for introducing these things; but it became a question as to how far they could follow chemistry—how far their practice corre-

sponded with what he had told them. He thought, for instance, that superphosphate made from bones was almost a thing of the past.

Dr. BERNAYS thought, with respect to farmyard manure, it scarcely mattered what time of the year it was put in. The best crop to give it to was wheat, and then give the turnips artificial manure.

Mr. FISON drew attention to the fact that some gentlemen in that neighbourhood were growing mangolds from artificial manure only.

Dr. BERNAYS said the preparation for the mangold was made in the dressing for wheat. The practice of the farmers would be before the theory of the chemists in that matter. The plant simply required phosphate: whether it came from coprolite or bones was immaterial. If the plant could get ammonia when it wanted it, it would not matter whence it came; but it very often happened that plants could not get ammonia when they really wanted it. One of the great advantages of farmyard manure was that it kept up the heat of the soil.

SANITARY REFORM.

At a meeting of the Banbury Chamber of Agriculture, Mr. FENLAY DUN read the following paper:

The sanitary state of rural cottages deserves the consideration of all who are interested in the well-being of the labourer. Landlords, farm tenants, clergymen, medical men, and sanitary authorities are equally interested in providing healthy, decent homes for the poor. It must never be forgotten that the surroundings make the man. The black country is dark, not only in its atmosphere, but too often in its squalid homes, its improvident pauperism, its heavy assize lists. Material and moral degradation go hand-in-hand—they mutually re-act and reproduce each other. Dilapidated cottages tell too often of the dilapidated fortunes of their inmates. Dirt and disorder are inconsistent with self-respect and industrious, thrifty habits not less than with health. In tumble-down, inconvenient, overcrowded, filthy abodes, it is obviously hopeless to find contented, steady, robust workpeople. I would briefly notice some of the conditions which may be regarded as essential in securing a decent, happy home for the agricultural labourer. The cottage should, if possible, be in a convenient central situation on the farm, rather than in the village. A trudge of two or three miles to and from work, in all weathers, is a hardship still common in many English districts, has resulted from the absurd law of settlement, and is a wasteful expenditure of power that might, to say the least of it, be more profitably employed. In lone cottages, as they are termed, removed from the temptation of the village ale-house, men are apt to become more steady and painstaking; women are more domestic, prudent, and less disposed to gossip; children are more healthful, better brought up, and the girls are believed, on good authority, to make better domestic servants. Moreover, living close to their work, labourers can, with advantage to themselves, and without injury to their employers, enjoy their meals at home; whilst in wet weather they have the opportunity of changing their damp clothes, and thus diminishing their risks of rheumatism—the arch-tormentor of the English agricultural labourer. For the cottages, which may be advantageously and economically built in pairs, a pleasant, dry site should be selected, somewhat sheltered from the prevailing winds, and handy to a good supply of pure water. Overtopped by other buildings, placed in a dismal hole, there will be lack of light and sunshine, which prove so essential to health. Underneath the towering walls of Continental fortified towns, shut out from exhilarating sunshine, it has been found that an enormous percentage of idiotic, deaf and dumb, deformed, and weakly children are born. Many cottages, and not a few more aspiring houses, are set down without adequate drainage of the site, and without provision for the effectual removal either of surface-water or sewage. Around the foundations, three or four feet below the surface, draining-pipes of three or four inches calibre should be placed, and overlaid, especially in clay soils, with a foot of broken stones to ensure the rapid removal of top-water. Damp dwellings develop rheumatism and consumption, a sluggish circulation, favourable to the production of congestion, ulceration, and some forms of skin disease, with that feeling of lassitude which craves for stimulants. From suitable grating of iron or stone at the back and, if need be, at the front doors, glazed stone-ware pipes, six inches in diameter, and provided with a good fall, should carry off the refuse-water from the house. Drains passing underneath a cottage should be laid in cement-concrete seven inches thick. Outside the house, the drains particularly, if containing the

outflow of a water-closet, should have a siphon trap, with properly fitted cover, and be ventilated by a two-inch iron or zinc pipe, taken up to the roof. The superfluous water and house drainage must be carried, as the Jewish law enjoins, outside the camp, or, in other words, sufficiently far from any dwellings; whilst special care must be had that it does not percolate into any wells or other sources of water supply. In many towns, and not a few villages, contamination of water supply, as will be hereafter noticed, is a prolific source of chronic ill-health and of periodical outbreaks of fever. No cottage should be built without provision on the ground-floor for a kitchen at least 10 feet by 12 feet, and 8 feet high, a back kitchen of nearly the same dimensions, a pantry and cupboard; whilst overhead there should be three bedrooms, in one or more of which a fireplace and a grate should be provided, so as to secure warmth, comfort, and ventilation, in case of sickness. Windows, always made to open well up to the top, should be of liberal dimensions, for darkness is often a cloak for dirt. Casement's in cottage-windows are seldom more than half the size they should be, and are not often enough or long enough set open. Without three bedrooms, a family could not have sufficient healthful accommodation and decent separation of the sexes. No sanitary error is productive of worse effects than overcrowding. In some of its aggravated forms, it is tantamount to slow poisoning. Indeed, these breathing again and again the same heated, confined air, reeking with noxious organic emanations, unless gradually inured to its deleterious, depressing effects, would perish miserably, like the unfortunate sufferers in the black hole of Calcutta, or the prisoners pent up in the cabin of Londonderry. Eight or twelve persons, some of them unmarried adults, of opposite sexes, are sometimes found, even in rural villages, huddled into one dingy sleeping apartment, the doors and windows religiously closed, the atmosphere charged with carbonic acid and foul animal effluvia; physical, mental, and moral health reduced to a low ebb. Living in the open air, as agricultural labourers do during fully one-half of the twenty-four hours, they do not suffer so much from this nocturnal crowding as those pursuing indoor occupations. In rural districts such overcrowding is inexcusable. Despite our increasing population, there is still throughout England and Wales an average area of two acres for each human being. Far otherwise, however, is it in many of our larger towns; in Glasgow, for example, there are ninety-four persons to an acre, in Liverpool one hundred and three, in London one hundred and eighty, with an average of nine persons to each house. Of 1,465 families living in the tolerably well-to-do parish of St. George's, Hanover Square, 929 had but one room, and of these two-thirds had only one bed. In Whitechapel and other districts of East London matters are still worse. In some of the low lodging-houses, in the town dwellings of the very poor, and in the workshops of some trades, the want of cubic space and pure air are most notable. Instead of the 700 or 1,000 cubic feet which are requisite for healthy existence, many a poor stilled wretch sleeps with a tenth part of that cubic space. In consequence results a high rate of sickness and mortality, especially amongst the infant population, with abundance of pulmonary consumption and other forms of scrofula, paralysis, and other nervous disorders, with frequently occurring attacks of contagious and epidemic disease, against which the debilitated constitution makes a poor stand. Continually breathing a contaminated atmosphere, the blood becomes vitiated; the

consequent depression is vainly endeavoured to be relieved by the free use of stimulants. Much of the drunkenness, recklessness, and various forms of brutality, still too common both in town and country, are ascribed by all competent authorities to the wretched state of the dwellings of the poor, and especially to their indecent and unhealthy overcrowding. Like causes everywhere produce somewhat similar effects: let us beware, then, of lowering the stamina, stature, and usefulness of our agricultural labourers by baneful overcrowding and foul air. Not only should every adult have his allowance of at least seven or eight hundred cubic feet of space in the sleeping rooms; but the wholesome change and purification of such air, of which three hundred cubic feet are contaminated during six or seven hours of slumber, must further be ensured by free ventilation through doors, windows, and chimneys, and if need be by openings in the ceiling. These are matters which the Sanitary Bill at present before the House fittingly brings under the notice of the local authorities. As is the rule on most considerable properties, two families should not occupy the same cottage, nor except under special permission should lodgers be allowed. Separate back premises, properly constructed, and with well-built water-tight vaults at some distance from every building should be provided for every cottage. A community of such conveniences is detrimental to decency, and saps the spirit of self-respect and independence which are so important for the family well-being. In most villages and small towns earth closets are probably more convenient and healthful than the old-fashioned privy, or the more modern water-closet, which requires a considerable and constant supply of water to keep it sweet. An ash-pit in a suitable situation will keep rubbish and garbage from being left scattered in odd corners, and will moreover, economise the manure for garden and allotment, for dirt, as was aptly remarked by Lord Palmerston, "is only matter in the wrong place." Where pigs are kept great care should be exercised in keeping them clean, and their food, if sour and stale, as it so often must be, kept at a considerable distance from the cottage. The acid, noisome smell of this hog-tub, although, perhaps, seldom directly productive of disease, cannot be favourable to health; in those unused to it, certainly often produces nausea and disordered digestion; whilst it may help to feed fermentation and become the nidus on which special poisons fix themselves. In all considerable towns with any pretensions to cleanliness, pigs are now properly banished. Inhabiting a damp and foggy climate, it is discreditable to our care and foresight that we have to complain of "a dry and thirsty land where no water is." It is only comparatively recently that the sanitary importance of a good water-supply has been sufficiently recognised. Endowed with a wonderful power of picking up and dissolving the gases, mineral matters and organic substances, with which it comes in contact, water acts as an almost ubiquitous scavenger, and as the great purveyor of plant food. But this absorbent faculty, so advantageous for the vegetable kingdom, often renders water unsuitable and dangerous for the use of man, and of the domestic animals. The limpid stream, erst in perfect purity, trickles through some manure-heap, perchance through some churchyard mould, or receives from some leaking overfilled privy vaults decomposing organic matter, or worse still the germs from some case of typhoid fever, scarlet fever, or cholera, and hence, until again purified by free exposure to the air the cleansing refreshing water becomes the unsuspected vehicle of disease and maybe of death. Thousands of cases of sickness are thus developed. In some villages the brook is at once the source of water-supply and the common sewer. No wonder when after a dry summer the stream becomes small, and the noxious ingredients are hence in a more concentrated form, that the water has a suspicious flavour, smells badly when boiled, and produces in the people that drink it diarrhoea and fevers, and induces in cattle and sheep digestive derangements, quarter evil, splenic apoplexy, and abortion amongst cows. In India there is a popular notion that cholera and other serious disorders result from malicious poisoning of the wells. At home, as well as in India, the wells and other sources of water-supply are too often poisoned, not intentionally, but ignorantly or carelessly; not with poison from the chemist's shop, but with the equally dangerous subtle poison of the sewers. This form of poisoning the Legislature at last condescends to take cognisance of. The Government Sanitary Bill properly provides for the frequent examination and supervision of the

water-supplies for towns and villages, for the prevention of water-contamination, and for the punishment of those who spoil or injure the sources of this chief necessary of life. The drink of the labourer naturally suggests the question of his food. In the midland and southern counties of England it unfortunately is often deficient in nutritive elements. There is seldom any serious deficiency in quantity, but it is short of those albuminous materials which impart power and robustness. Roughly to compare the men with the horses, they have seldom cause to complain of their supplies of straw-ehop; but they would be better if they could have more of what corresponds in the equine dietary to the oats, beans, and hay. In the labourer's fare, matters would be mended by adding to the bread, vegetables, tea, an occasional quart of beer or cider, which constitute the ordinary dietary, an increased quantity of pork, bacon, or cheese, a daily pint of good milk, and a weekly pound or two of beef or mutton, whether home-grown or colonial. The Australian meat will yet prove an immense boon to the English labourer, will help to improve his bone, muscle, and nervous force, will save him from the frequent wearing out bad legs, and diminish his share of sickness. The Poor Law medical relief returns show how closely sickness and poverty are associated. Of our regiment of one million paupers, 15'34 per cent. were on the doctor's list on December 10th, 1869; to this suffering multitude the in-door paupers of England contributed 29'5, whilst the out-door only supplied 12'7 per cent. In Berkshire and Oxfordshire the per centage of pauper sickness was over 20, or more than double what it was in Northumberland, Durham, Cumberland and Westmoreland, or the Yorkshire Ridings. Sussex, Essex, Worcester, and Suffolk, all reach 18 per cent., whilst Wilts and Dorset are about 17 per cent. The lower wages, the insufficiently animalised dietary, the excessive swilling of beer or cider, the absence of milk, appear to account for the higher rates of sickness as compared with 7'6 in Durham, 7'7 in Northumberland, and 8'6 in Cumberland. Admitting, as we have endeavoured to show, that health and life are senselessly wasted, that preventible disease still claims its hecatombs of victims, that insanitary conditions continue to develop drunkenness, pauperism, lunacy, and crime, how, it may be asked, can these evils be remedied and prevented? The evils are evidently somewhat complicated; they spring from various sources, they are inborn and bred through many generations. To be successfully attacked an assault must be made upon them from several different points of vantage. The ignorance, carelessness, and apathy which produce and perpetuate so many sanitary errors must be gradually got rid of, mainly by education. The ingrained hereditary affection for dirt, physical and moral, the corporeal and mental faults developed during several generations, certainly cannot at once be set aside. There is a grim philosophy in the gouty old gentleman unwillingly obliged to be moderate in his libations of port wine, shaking his stiek, imprecating the portrait of his great-grandfather, and declaring, "Your drink brought down gout upon us all." Drinking in its immediate and remote consequences has brought down much sickness and misery on all classes of the community. Although adults may not care to learn to practice sanitary laws, the rising generation may be taught to understand and respect them. They should be insisted upon in schools, and the children instructed in self-preservation, as well as in prudence and self-respect. The four thousand medical men scattered throughout England should form reliable sources of sanitary information, and should enjoin the prevention as well as the cure of disease. But until the masses of the people have learned neither to jeopardise their own health, or that of their neighbours, it behoves a paternal government by warning injunction and statute, such as that shadowed forth in the bill now before the House of Commons, to secure for all classes of the people pure air, pure water, sound wholesome food, and reasonable protection from any insanitary condition connected with their calling. Two great matters, in brief, are to be aimed at, namely: 1. To raise the general health of the community. 2. To destroy special causes of disease. These good ends may be somewhat hastened by the promulgation of the following resolutions:—1. That sanitary causes account for half the sickness and mortality, and for a large amount of the pauperism and crime of this country. 2. That the Sanitary Bill now before the House of Commons, although necessarily stringent, and granting great powers to the central authority, well deserves the approval of this Chamber, as it will ensure through-

out the country a uniform, universal, and imperative administration of sanitary law. 3. That as great expenses under the proposed Act may be entailed on poor districts, in carrying out drainage or other sanitary improvements, provisions should be introduced into the Bill whereby assistance from the national exchequer should, when required, be granted.

Mr. BRAZIER thought it would be difficult to get such cottages erected as Mr. Dun proposed. He supposed they would not be erected at less than from £150 to £180, and that being so, where was the rent to come from? Under existing circumstances no labourer could pay £7 or £8 a year. It was in reality a landlord's question, and he was afraid there were very few landlords in the country who were prepared to lay out £3,000 or £4,000 for cottages for the people. He knew a village in which eight children, with their father and mother, slept in one room. The children took typhus fever, and three of them died. Such a state of things ought not to exist in a Christian country. What must be the state of the morals of families brought up under such circumstances. The effect must be bad beyond description. The men should be paid in money. He did not think it was right for any master to lay out any part of the man's money in beer, cider, or anything of the kind. The masters helped to increase the poor-rates who gave cider or beer to their labourers. If the men had good food, he did not think they would require anything stronger than tea, coffee, or water. That had been his experience for twenty-five years. He never gave any beer to his men. He seconded the adoption of Mr. Dun's resolutions.

Mr. WESTOVER thought the women did not like to live on the farm because they could not gossip, and they got their husbands to give up their situations in order that they might go where they could gossip.

Mr. THURSBY agreed with Mr. Dun as to the necessity of having cottages on the farms. With the exception of two, all of his men had three miles to walk to their work. It would be better for the children if they had to walk a little distance to the school. To have the men living on the farm would be better for the farmers and the men. If the latter got wet, they could change their clothes without having so far to go. It was thought by some that the farmers would not behave well to the men if they lived on their farms, but he did not believe the men would suffer. They might get a piece of land on the farm to cultivate. If the sanitary improvements proposed by the Bill were to come out of the rates, he would oppose the resolutions. Until Parliament had done something to relieve their burdens, it would be unwise in the Chamber to sanction increased expenditure.

Mr. GRIMBLEY, in his position as chairman of the Banbury Board of Health, had observed with attention the very considerable success that had attended them in the matter of dwellings, in the matter of water supply, and in the matter of drainage, on the health of the inhabitants. Perhaps he might remark, in reference to what Mr. Westover had said, that an increased health-rate lessened the poor-rate. One or two facts relating to sanitary improvement in Banbury might be of some value to their friends in the rural districts. Some years ago when Mr. Rammell visited the town to make an inquiry into its condition, the death-rate was either 29 or 33 in the 1,000, he (the speaker) was not sure which. Now, it was very gratifying to find that the death-rate for the last quarter of the Board of Health district was 15½ in the 1,000, and deducting the death in the union, it was only 14. They must admit that sanitary improvement had done something for this district. The death-rate had been reduced something less than one-half. They had done this, too, without increasing the burdens of the ratepayers. The rates 15 or 20 years before the existence of the Board of Health were much higher than they were now. He believed they could have good health in the community by very simple means. They wanted good water—water not impregnated with drainage—good drainage, and less over-crowding in cottages. They in Banbury must not say a word about the villages, because they had almost as bad a state of things as in the villages.

To give them an instance. The other day a case of small-pox occurred in a court in Fish-street, and in one bed-room there were, a woman (ill with small-pox), her husband, and two children, all sleeping there. The woman was taken to the union, but had since been discharged cured. The house had been thoroughly cleansed, and the disease prevented from spreading. He might state that at the present time there was not a single case of small-pox in the town [The Chairman: "I am very glad to hear it."] He advised them to give this question of sanitary reform their most earnest attention, and they would confer upon themselves and their poorer brethren a boon which they could form no money estimate of.

The Rev. F. LITCHFIELD felt bound to say, by long experience of Boards of Guardians, that they were not the very best persons to entrust with the execution of the law relating to the health and comfort of the poor. He saw this more and more. They had so many personal interests that they could hardly ever be relied on, however perfectly independent votes they might give. He could claim the superiority of having longer experience in this matter than any of those who were present, and consequently he had been able to consider this vast subject for a much longer period than any of them. He had some local experience in the matter, and in 1826 in a neighbouring parish he began the demolition of bad cottages, and also the improvement of bad cottages, without pulling them down. He began by examining the state of every cottage, and found that scarcely a bedroom had a lattice window. The first thing he did was to introduce lattice windows into every bedroom. He endeavoured to get for the people pure air and good water. Good air was very little use without good water. Near every door and window was a pigsty, which he had removed to another place, but they were not removed altogether.

The Rev. C. W. HOLBECK, the Chairman, said that one practical difficulty was to get the poor people into cleanly habits. There were old cottages that were kept very clean, and in some good ones they would find the reverse, and a lot of straw stuffed in the chimney to prevent ventilation. They should give a prize for the cleanest cottages.

Mr. WESTOVER: It would be very dangerous to go and inspect their cottages just now. We dare not speak to the men.

Mr. COLEMAN said that Mr. Litchfield threw some discredit on Boards of Guardians, but they had very little power. Some four or five years ago the Guardians of his district inquired into the cottage accommodation, and found a very disgraceful state of things, but they also found that they had very little power.

Mr. DALBY said: With reference to Mr. Litchfield's remarks about Boards of Guardians the same argument would apply against all local government whatever. The same thing might be said of Boards of Health and Town Councils, and they had an instance of it at Wolverhampton, where the Town Council declined to carry out the advice of their medical officer, and he had resigned. It would thus be seen that abuses were not confined to Boards of Guardians. The new Licensing Bill provided for the appointment of an inspector for every 100,000 people to look after the delinquencies of publicans; and how much more important would it be—and it would take off a great deal of local odium—to appoint a medical officer for each district, who would report to each board, and to the Central Board if his recommendations were not taken up. He hoped that Mr. Dun meant in his resolution that the money was to be given by Government in the shape of loans, to be repaid, and not given in the way of subsidy. Mention had been made about increasing their rates, but what they had to fear in the country, he considered, was an increase of officers and boards. If pensions to all the officers had to come out of the public funds, then there would be an immense increase in the rates.

The resolutions, as proposed by Mr. Dun, were unanimously agreed to, and a vote of thanks was passed to Mr. Dun for his paper.

THE LOST LANDS OF LINCOLNSHIRE.

What is most surprising at first thought in connection with the devastation caused by the tides upon the Lindsey coast, and within the Humber, is the rapidity with which land has disappeared in comparatively recent times, as opposed to the certainty that up to that period the Humber was tideless. Since then, at the lowest computation, not less land has been devoured on the Lincolnshire side than would form a belt four furlongs wide the whole distance from Tetney haven to the Trent falls. Where are Owle and Honflet? "Gone to Humber," as the Marshmen say of anything irrecoverably lost. The former was a hamlet to Clec, upon Clec ness, which for a long time subsequent to the beginning of the 12th century extended broad and elevated from the present cliff at Cleethorpes to where the mid-channel of the Humber now is. The latter was a fishing port situate two furlongs distant from the present foreshore of Stallingbro' marsh opposite the outfall of the old fleet drain, and stood upon a similar projection of land. Dsdy. Bk. mentions *terra in Weyflet (Honflet) et Stalningburg* (Stallingbro') inland and some of the manor of *Chelebi* (Keelby), and Dugdale says: "King Henry I. granted to the Priory of Gt. Grimesby, which he founded, the 10th penny of all his Farmes in *Leishy* (Laceby) and Grimesby, and the *Tythe of all fish in his Port of Honflet*." Many years ago, induced by some lingering traditions communicated by the Marshmen, the writer made search at lowest ebb of tide for any vestige or relic of the place, but without other result than narrowly escaping the fate of King Humber. Passing over the intermediate space, it may be observed that Barton-upon-Humber, or a considerable portion of it, appears tated to become Barton-in Humber. The waste at Barrow, Barton, and Ferryby within living memory has been enormous: at the latter place are some living who have heard their fathers mention having seen the hounds in full cry followed by a gallant field of huntsmen where now the river steamers pass along with ebbing tide. Neither history nor tradition tells of a Roman town having once existed upon the bank below Ferryby Cliff, but whilst for now many years past by degrees and relentlessly devouring its site, Humber has revealed the fact, bringing to light countless fragments of pottery, urus (some cinerary), vases, Roman silver and bronze and Saxon gold coins, fibule in great variety, amber beads, leather sandals, and various other evidences of ancient population and wealth. In the aquatic character of its site, which is or was not more than an average level of 2 feet above high water, this lost town has a stronger claim than Alkburgh to be considered the *Aquis Sta.* of the Romans. The old Barton-street from Louth, via Keelby, undoubtedly extended to this point, from whence the Romans may have had a *trajectus* as well as from Winttingham haven, but the position must have been singular and dangerously low through liability of being swept by floods, if we believe that the Humber has undergone no change of level. The positions of various sites once occupied along the Trent banks are equally remarkable, and the fact that in Roman times the Isle of Axholm was well wooded and populated in places now liable to frequent inundation, is altogether irreconcilable with a belief that the Higre (*Ey-gre*) or "tide-wave" ever reached therewith in those times, unless, at least, we accept the theory of a subsidence, uniform and general, of all the low lands adjacent to the Humber. Camden gives the saying of some old men of Thorne in reference to the subsidence of the land thereabout, "that whereas they could before see little of the steeple of Gowle, they now see the churchyard wall." In all peaty soils subsidence is a well-known natural consequence of drainage, but the Isle having been as well drained in Roman times as at any subsequent period, we require something more to account for its present almost uniform and general low level. Has its depression been brought about suddenly, or accelerated by some such extraneous causes as earthquakes? This is not unlikely, though history were altogether silent respecting such phe-

nomena during the last eight or nine centuries. "In the 33 Hen. II. a great flood happened in Holland, Lindsey, and Holderness, countreys of England, the 10th of October, which came in Alhingham, wherethrough a great portion of land, with houses and people, were drowned" (Stow's Chron.). This was an extraordinary rise of the ocean. Again, "About the year 1357 the tides in the river Humber flowed higher by four feet than formerly." Dugdale thinks for several years afterwards, and mentions frequent repairs of sea-banks. Was this a permanent rise of the water, accompanied by a corresponding subsidence of the low lands, the effect of an earthquake? Any positive information in the affirmative would explain the disappearance of so many old boundaries to the increasing width of the Humber since that date. Its channel is said to be constantly shifting owing to changes of current, but it has probably never altered much in depth, certainly not lessened; for whilst a gravelly bar across its entrance is found at 5 fathoms with water suddenly deepening to 18 on the outside, the scour of the tides maintains 7 fathoms for some miles within. The idea entertained by some that what is lost to Lincolnshire is gained by Yorkshire lacks support. True, a considerable area has been lately reclaimed on that side, but nothing in comparison to what Holderness has lost. Where is the famous and once great port of Ravenspurn, or Ravenserodd (*Wa-en-cior-ud*—upon the earthen or alluvial ridge), within the Spurn, the once great rival to the port of Grimsby? Trinity sand alone marks its site. Yorkshire may mourn its own lost lands, and has urgent need for looking to the spoon and preservation of its aquatic barriers. Spurn, or "Spoen," as the Cleethorpes fishermen insist upon calling it, spite of all correction from fashionable and educated tourists, and as though determined to preserve the dialect of their forefathers, but probably unconsciously of so nearly representing the sound of the old Celtic *Cep-ö-en*, meaning "headland," is a mere ghost of Ptolemy's *Ocellum Promontorium* (Ocellum from the Celtic *Egl*, pronounced *Eusel*, "a stream, or river, any falling or flowing water"). The recent prohibition to shipping gravel therefrom came not a day too soon, for the head was already threatened with isolation from the mainland; a bad job for a large portion of Holderness if it should ever happen. Ptolemy's name for the Humber, *Avrs*, is derived from the Celtic *Ap örec*, "the river-land waters" of itself equivalent to "Estuary." The name in modern use comes from the Kymric, Old Welsh *Hymyr* (Kelto-Gothic *Ey öm Gyr*), "the river plain of the Marsh," but contains no allusion as popularly supposed to the noisy and turbulent nature of its flood as described in Drayton's lines—

"What flood comes to the deep
Than Humber that is heard more horrible to roar?
For when my Higre comes I make my either shore
Even tremble with the sound that I afar do send."

Great as the waste has been within the Humber, it has been far exceeded along the coast. Not a shore township of Lindsey exists but has its traditions of large tracts of land eaten away by the sea. Oldfield mentions a tradition of the Marshmen that from Ingoldmells and Skegness the land once projected to the outer Dowsing, a sand bank at seven fathoms depth, about 20 miles distant eastward. His informants, however, confounded two sets of traditions, one relating to the inroads of the sea within the last six or eight centuries, the other to the sudden submergence of the original coast lands of Lindsey, embracing about equal to one-fourth its present area, which must have happened before the commencement of the Christian period. The traditions embodied in the Old Welsh Triads make allusion to occurrences which might, and no doubt did, produce this catastrophe. "The three chief islands of Britain were Orc, Manaw (the Isle of Man), and Gwyth (the Isle of Wight.) Afterwards the sea broke in, so that Mon (Anglesey) became an island, and in like manner Orc was so broken as to become a multitude of islands, and other parts in Albania and Wales became islands" (Triad 66). The truth of

this is corroborated by Nennius, where, in the enumeration of the isles dependent on Britain, having mentioned the isles of Man and Wight, he says, "The third is Orecania, that is the Oreades; for thus an ancient proverb expresses it when applied to judges or kings, 'he gave law to Britain and its three islands.'" That the sea was sole agent to rending the Oreades asunder, and out of one forming so many isles, might be doubtful; but in another Triad, the 13th, we are told of the second great calamity of Britain, "the calamity of the *dreaf-ful fire*, when the earth opened to the abyss, and the greatest part of all living were destroyed." From the Triads the eruption appears to have been prior to the inundation, and the latter to have been owing to an elevation of the bottom of the sea, which probably preceded the explosion. Traces of volcanic action are numerous in the north of Ireland and Scotland, and Dr. Hamilton's account of the Giant's Causeway is interesting in relation to this subject. Was the North Sea tideless like the Mediterranean, and only entered over reefs, or through straits of shoal water, prior to these calamitous changes? There is some suspicion of it. The Welsh name of the Baltic, *Llychlyn*—i. e., "the lake of standing water"—seems to imply that the Sound was opened by this inundation, which Florus assigns as the cause of the emigration of the Cimbri: "The Cimbri, Theutoni, and Tigurini, exiled from the extremity of Gaul by an inundation of the sea over their territories, went in search of places to settle in wherever they might find them." Here is abundant testimony to shape and fix an idea of the time and extent of the devastation. According to the Triads, the latest arrival of immigrants to this island whilst it was under a pure Celtic dynasty were "The people of *Galedin* (Flanders), who came in open vessels when their country was drowned, and had lands given them by the Kymry." These people of *Galedin* were the latest additions to the Gothic element, which grafted into the Keltic stock, produced the ethnic life and character thenceforward known as the British. They were also identical with the Huns (G-hunns) "strangers," to whom were given all the low lands adjacent to the Humber. Ancient writers too often indulged in hyperbole and a mischievous practice of individualizing the names of persons and provinces, and hence originated the fable of "Humber, king of Huns," being pursued in flight after battle and drowned, with all his people, in the flood. At the time when these occurrences took place, we can only mark the limits within which it is most likely that they did so, that is, between the years 700 and 400 before the Christian era. According to Tysilio, about the former, the Kymry (old Welsh) first came into the island, and about the latter a new dynasty, the British, was founded by Dyfiwal MacIund, a Girvan prince, and a native of the province of the Old Gwent, who began his reign not long subsequent to the arrival of the Huns, or "people of Galedin." With these data to go upon, the disappearance of the original coast lands of Lincolnshire may be safely held to have taken place between the years 550 and 400 B. C. Great part of this original coast outline was undoubtedly of the same geologic formation as Hunstanton cliff, and when it became submerged would form a subaqueous reef over which the tide broke with diminished force upon the new shore. Its outline may yet be pretty accurately traced by 5 fathom soundings from opposite Gibraltar point, past the inner Dowling to the outer and thence to the Humber's mouth, the depth on the outside varying from 10 to 18 fathoms. Centuries appear to have elapsed before this natural barrier gave way to the increasing tide-wash of the sea, but once breached its destruction would rapidly follow; tidal action reducing its firmer parts into those beds of gravel which now strew the sea-bottom or are washed up by the waves along the shore. Then commenced that long series of devastations concerning which so many traditions exist. A broad headland reaching two miles out from North Somercotes, and which is said to have been linked to the Spurn of Holderness by a subaqueous ridge, at much less than five fathoms depth, extending from point to point, has been swept away; the naze of the *Skegn*, or "principal river" of the district, one extending as far out from Skegness and Ingoldmells, has met the same fate, and within the intervening space, the sites of many once populous

towns and important havens have altogether disappeared in the sea. It is found that simultaneously with the drowning of the original coast lands, they, with other portions of *terra inland* over which the flood swept, became covered with a layer of clayey warp, in some places of considerable thickness. Opposite Sutton and elsewhere on the coast the action of the water has displaced this covering, until at lowest ebbs of the tide a number of low islets lying from east to west are exposed to view, showing thereon the buried surface and forest growth of 2,500 years ago. Sir Joseph Banks had his curiosity so much excited about these islets that his friend Correa da Serra was persuaded to join him in an exploration, Sept. 1796, and afterwards wrote an interesting account of them. They are most numerous opposite Huttott, Addelethorpe, and Mablethorpe, but extend to Donna Nook, and cover a space of about a mile in breadth. They are generally covered with the roots, prostrate trunks and branches of trees, chief among which appear the oak, birch, and fir. The soil to which the roots are affixed and in which they grew, is a soft greasy clay, the same in nature as that found beneath buried trees throughout all the fen and carr lands of the county; and in most of the islets is covered with a thick layer of rotten leaves. The roots, bark, and leaves of the trees are for the most part found as fresh and perfect as they would be when growing. The timber is mostly decomposed or rotten, and the soundest portions brought to shore are found liable to rapid decay, so that the term "fossil" applied to these remains is a mistake, there being nothing fossil about them in the sense in which geologists now use that word. The islets are locally known as "clay huts," but (Keltic of) meaning "a ridge." That the shores of the Welland estuary have suffered waste in proportion to that already mentioned admits of no doubt, though we cannot estimate so nearly its extent. From very early times, times long antecedent to the Roman, the energies and skill of successive generations of *Girvans*, or "Marsh dwellers," have been directed to the defence of their lands from the inroads of the watery element; not always successfully or without relapse, but often with a sublime persistence of effort in face of frequent reverses and damage to their works in the struggle with their great and powerful enemy. So early as 180 B. C., and prior to the arrival of the Belgic immigrants driven from Gaul by the first successes of the Romans in that country, there was a Girvan King named Bladud, or, as Tysilio, the ancient Welsh writer, names him, Blaiddyt, in whose time we are told there was a culminating drought of three years and seven months' duration. He was a descendant of the great founder of British nationality above mentioned, built the "Royal" town of Stamford, and was the Vandermyden, or most enterprising drainage engineer of the age in which he lived, having his name from his skill in "fencing out, or environing the fen waters with strong embankments." Even in those days there were men of no common order in Eastern Britain, as the statements of ancient writers abundantly testify. Ptolemy's name for the Welland river, *Maclaris*, presents so thin a disguise of the Keltic-Gothic *Ma-le-er-ay*, undoubtedly the native appellation, that it clearly describes a river held up in its course above the adjacent levels by artificial means; moreover, in the *Rav-en* "raised or elevated land" bank, erroneously called Roman's bank; the *Te-upens* (Deepings), "artificial water-courses or canals;" the *Ma/s* (Mabl, Malte, Mel, Moul, &c.), "meles or embankments;" the *öes* and *te-öes* (Lofts, Podes, Tothes, Wads, Woades, &c.), "artificial banks, ridges, and causeys," &c. &c., so many remains of which are spread over all the low lands of Lincolnshire, we see evidence of enterprise and skill that may be safely ascribed to the age of Bladud, whose subjects whilst executing these works named them in terms familiar to their common dialect, and so fixed the nomenclature of their *ö-ayl*, or "river-lands" (Hollands) for all time to come. In conclusion, it may be observed that for all the land irrecoverably lost from our borders, it is some consolation to know that the genius and enterprise of those old Girvans yet survives amongst us; witness the reclamations in progress at Wingland, and others accomplished or projected elsewhere.—H. E. S. in *Stamford Mercury*.

STOCK-BREEDING.

BY THE NORTHERN FARMER.

The marked diminution in the number of newly dropped calves sent to market during the present season, and the greatly increased difficulty of procuring calves to rear in districts where no later than last year they were to be had in moderate abundance, shows unmistakably that the high price of store stock has aroused breeders to the importance of rearing every young animal that the resources and limits of their accommodation will permit. To all appearance there will be no necessity for interference on the part of the Government with the view of preventing the slaughter of calves or lambs, self-interest on the part of the breeder inducing him to hold over the bulk of his young stock for the sake of increased profit in the future, and compelling consumers to very materially lessen their consumption of such meat. The demand for young store stock being almost unprecedented, and the prices realized so high as to render a profit on their being sold fat to the butcher highly problematical, the dairy farmer by turning his attention more to rearing his calves than he has hitherto done, and sacrificing a part of the income derived from the usual products of the dairy, milk, butter, or cheese, may augment his aggregate receipts very considerably. With yearling cross-bred cattle of fair bone and substance making easily £10 a head, it is obvious that the man who breeds inferior stock, or who having them moderately well-bred, feeds badly, grudging the quantity and lowering the quality of the milk supplied, until it barely supports life, stands very much in his own light. Such injudicious management can have but one result, and that incontestably the picking of his own pocket. A niggardly person is quite unable to rear a calf well, and no employer should entrust this department of his business to a stingy-minded servant, however respectable, as such a nature can never yield to give the poor things a full supply. In the endeavour to make the most of everything, the milk will often be in an advanced state of decomposition before it is presented to them, causing serious disarrangement of the digestive organs, and a continual resort to medicine, a thing seldom required when good food and plenty of it is given from the period of birth. The extreme rates at which cattle are now selling offers the most powerful argument in favour of liberality in feeding, any amount thereby deducted from the cash receipts in other ways, being amply made up by the extra value of the cattle reared. The relative value of a well-nourished calf on the one hand, and on the other, the immediate produce sold from the dairy, are as nearly as possible balanced, nay, in point of fact, if there is a difference it rests in favour of the former, and that unquestionably when the dams are of a good sort, and crossed with a pure Shorthorn sire. Assuming this to be an admitted and incontrovertible fact, many of the economical mixtures largely used with the milk in particular districts may, with much profit to those who have been in the habit of using them, be dispensed with, and a more generous allowance substituted. Under the altered conditions of the present time for the better, the most objectionable foods are infusions of hay, commonly styled hay-tea, and skim-milk which has been permitted to stand until every particle of the cream has been extracted. In the spring, milk being mostly the produce of man-

golds, is at best extremely thin, and when skinned possesses but little nourishment, and is consequently incapable of building up a strong bony structure, and imparting a sound constitution to the animals compelled to exist on it. Economy is excellent in principle, but it is overdone when, for the sake of present gain, much future profit is sacrificed, and cattle reared in such a way as to make, when a year old, only half what they would easily have done had they been attended to with greater liberality. The first cost of a badly-fed calf is exactly the same as that of one well fed, the cost of attendance is also the same; so that the sole difference in cost between the one and the other is the value of the small quantity of extra food which is required to distinguish liberality from semi-starvation. This difference on the day of disposal will to a certainty be made up to the owner to an extent far and away beyond what it cost to turn out his young stock in the style and condition necessary to secure such an advantage. Although strongly advocating the use of skimmed milk not too long left down, and assisting it with preparations of linseed or Indian-meal, I yet consider that, under the greatly altered circumstances in connection with the increased price for live stock, while the price of milk and butter remains comparatively unaltered, the pure milk as drawn from the cow could not be turned to more profitable use in country districts than by giving it to her calf in such proportion as it may require, for a considerably extended period before substituting any portion of skim-milk. The encouragement given to do this is at the present time very great, good cattle being in such demand for the rich grazing districts, while those which are badly bred, badly reared and unthrifty, must still go to the holders of poor land at a miserable price, the prosperity of the cattle trade scarcely affecting them pecuniarily. Apart from the meals already alluded to for strengthening the milk, and enabling a larger number of calves to be reared on a limited quantity, much benefit is derived from placing a few slices of turnips or mangold, according to season, in troughs, and hanging a bunch of sweet hay in such a position that the occupants of the pens can conveniently reach it. At four weeks old they will begin to nibble at both, and in a fortnight thereafter there will be a perceptible quantity consumed, this food greatly assisting condition, more especially when a few crumbs of oilcake are scattered over the sliced roots. When three months old the quantity of this kind of food consumed will be considerable if it has been given regularly; and if found necessary to withdraw the greater portion of the milk at that age, it may be done without the slightest danger of retrogression, the young creatures being quite capable of sustaining themselves on roots, hay, and oilcake. There is a principle developed in this mode of treatment which is of the utmost importance in rearing cattle, and that is having them accustomed to the variety of food they must subsequently subsist on before the supply of milk is wholly withdrawn, the same course being followed in subsequent changes. By attending to this much trouble is avoided, the sleek condition laid on by the liberal feeding is retained, and no loss or depreciation in value has to be submitted to. If the pasture available for the calves is unavoidably bare, which contingency frequently occurs

where a heavy stock is regularly kept, particularly in dry seasons, they may be kept in the yards for a considerable portion of the summer on bulky food when they have previously learned to eat it freely, going on the pastures when from a change in the weather or other favourable circumstance they are able to obtain a full bite. Late dropped calves may thus be held on in houses or yards, according to convenience, all through the autumn and winter, never being put out to the fields at all, until the succeeding spring, reaching that age in far better health and condition than if they had been forced to obtain a living in the open field with older and necessarily stronger cattle, unless grass of a succulent and nourishing character was to be had in abundance. Every one knows the proverb about what it requires to make a good milk cow, but with young cattle no less than with the grown cows is this true, as the value of every animal is in exact proportion to the treatment it receives. If fully fed when at the pail a good foundation is laid for the succeeding stages of its existence, and continuously good treatment will not fail to make it profitable for whatever purpose it may be required, whether for the butcher or the dairy. Many valuable lessons may be learned in the art of cattle-breeding by keeping a few notes every year of the history of each calf, as for instance its age, descent, the food or mixture of foods on which it was reared, and its capability for taking them. At a year old there will be found a vastly greater diversity in the size, condition, and health of a large lot of young cattle than there was when they were taken from the milk, it being so much easier to preserve equality of appearance in the earlier stages, by giving the young, puny, or delicate calves milk of superior quality or in greater quantity. When, however, the time comes that they must necessarily subsist on food of a bulkier and possibly less nutritious nature, not so easily assimilated by the digestive organs, those in which a sound constitution is hereditary at once take the lead, visibly increasing in bulk and stature; while those not so fortunate become noticeable as shy feeders, require much care and petting to retain a moderate degree of health, and by the time the spring comes round have not increased in size or value in a measure proportionate to the expenditure which they have occasioned. The cows, which by experience and observation in this way have been ascertained to breed delicate calves, difficult to rear, and apt to lose condition and become delicate during winter, should either be got rid of altogether, or if valuable for the milking quality their calves disposed of at birth. The cow that habitually breeds a useful sound-constituted calf is well worth keeping, when also a good milker. Her progeny should therefore be marked and kept as permanent stock on the farm, and every bad thriver got rid of as soon as it is ascertained they are so, no matter at what apparent sacrifice for the time-being. Selling the best animals every year for the sake of the extra cash which they make is the surest road to deterioration and loss that a farmer can follow, and should be rigidly struggled against, no matter how great the temptation, or however high the price that may be offered. The tiller of the soil having much longer to wait for a return on his capital than the merchant or tradesman, it becomes doubly his duty to take all the advantage possible of the opportunities which Nature has given him. It should be his constant endeavour, by the exercise of theoretical knowledge and practical skill, to grow crops in abundance, doubling and trebling if possible the yield on each acre by liberal manurial dressings, and breeding stock of such excellent quality as to enable him, by the considerable sums realized, to meet his liabilities with punctuality on the day they become due, and

to live in a style befitting a man of education and acknowledged position. While the merchant may turn his capital over and over again in the course of a few months, no earthly power can enable the farmer to take more than one crop of corn in a year from his land, or get a live calf until the full period of gestation has elapsed. Hence his opportunities for obtaining profit on his capital being few, his vigilance can never be permitted to slacken, if he means to achieve success and realize a competence for his declining years. It is pretty generally admitted that few men have the ability to accumulate a fortune out of the profit of farming alone, but that money may be made in moderate abundance, while at the same time a respectable style of living is kept up, is proved by so many instances in every district of country possessing ordinarily good land that the assertion will scarcely be looked upon by any one as exaggerated. Mere hard work does not forward the interests of those engaged in agriculture so very much, even in the case of the small occupier, who takes a share himself in the toils of the field; and on a larger scale, the employer of labour who continuously attempts to drive workmen beyond the usual pace necessary to the fulfilment of a fair and honest day's task, is seldom seen to benefit perceptibly by his ungenerous exertions. Skillful management, combined with a moderate amount of personal labour and activity, secures by far the most successful results, the mind relieving the body of the weightiest part of its burden, when prudence and forethought are both cultivated. When a man cleans his land well, and manures highly, placing on it stock only of good quality, he lays the best possible foundation for building up a superstructure of agricultural prosperity, and if his commercial transactions are conducted on as sound principles, he can scarcely fail in attaining an independent position.

THE VEGETABLE BEEFSTEAK.—This fungus, which resembles a great red tongue protruding from the tree-stems, when once known can never be mistaken for any other species. It generally confines itself to old (and often prostrate) oaks; but in Epping Forest it is not uncommon on the beech. We have also seen it more than once on the ash; and it has been observed on the chestnut, walnut, willow, and other trees. We have tasted it from various habitats, but have never been able to detect the least difference in the flavour. Although such a large fungus, its growth is very rapid, soon appearing, and again disappearing, on ancient trunks in the autumn. When cut, broken, or bruised, it distils a copious red juice like beef gravy. "When grilled," says Dr. Badham, "it is scarcely to be distinguished from broiled meat, and Berkeley describes it as "one of the best things he ever ate, when prepared by a skilful cook." There is a very slightly acid flavour in the fungus when cooked, which adds considerable piquancy to the dish; it is extremely tender, succulent, and juicy, and resembles tender steak or tongue in a remarkable manner, the juice it distils being in taste and appearance like gravy from an excellent broiled rumpsteak. Of course, it should be gathered when quite young, fresh, and clean, and at once prepared for the table in the following manner: wash and dry, and cut into quarter-inch slices half an inch wide, soak in scalding water for five minutes, and stew with butter and herbs; yolk of egg may then be added, and serve hot; or simply stew with a good steak, adding a scallion and parsley, salt and pepper.—*The Gardener.*

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL, *Wednesday, May 1.*—Present: Sir Watkin W. Wynn, Bart., M.P., President, in the chair; Earl Cathcart, the Earl of Leicester, the Earl of Powis, Viscount Bridport, Viscount Ossington, Lord Chesham, Lord Kesteven, Lord Tredegar, Lord Vernon, the Hon. Wilbraham Egerton, M.P.; the Hon. H. G. Liddell, M.P.; Sir T. Dyke Acland, Bart., M.P.; Sir T. Hesketh, Bart., M.P.; Sir A. K. Macdonald, Bart.; Mr. Barnett, Mr. Barthropp, Mr. Booth, Mr. Bowly, Mr. Cantrell, Colonel Challoner, Mr. Davies, Mr. Dent, M.P.; Mr. Druce, Mr. Edmunds, Mr. Brandreth Gibbs, Mr. Hornsby, Mr. J. Bowen Jones, Colonel Kingscote, M.P.; Mr. D. McIntosh, Mr. Milward, Mr. Randell, Mr. Ransome, Mr. Ridley, M.P.; Mr. Rigden, Mr. Sanday, Mr. Shuttleworth, Mr. Statter, Mr. Stone, Mr. Thompson, Mr. Torr, Mr. G. Turner, Mr. Jabez Turner, Mr. Wakefield, Mr. Webb, Mr. Welby, M.P.; Mr. John Wells, Mr. Wells, M.P.; Mr. Whitehead, Mr. Jacob Wilson, and Dr. Voelcker.

Colonel R. Loyd Lindsay, M.P., was elected a governor of the Society.

The following new members were elected:

Abell, John, Middleton Park, Sudbury, Derby
 Barker, D. Wilson, Mayfield House, Worcester
 Badcock, Richard, Abingdon, Berks
 Bell, J. Atkinson, The Firs, West Heath, Basingstoke
 Battle, Uriah, Yeovil, Somersetshire
 Burlingham, Henry, Lausdowne, Evesham
 Cook, T. Eborall, Newport, Monmouthshire
 Colville, Captain Augustus H. A., Churnet Grange, Leek, Staffordshire
 Dodwell, John, Manor House, Long Crendon
 Elliott, Henry, 7, Clifton Place, Newport, Monmouth
 Ferris, J. Wakefield, Farhill Farm, Fairford
 Heatley, John, Broughton, Harmer Hill, Salop
 Holloway, Joseph, Tutbury, Burton-on-Trent
 James, David, Cawrence, Cardigan
 Johnson, E. T., jun., Moffatt House, Bow-road, Middlesex
 Jones, T., Talardd, Llanybyther, Carmarthen
 Keeble, George Colby, Narberth, Pembrokeshire
 Lempriere, Major H., Stone Court, Penbury, Tunbridge Wells
 Marsh, R., Pen-y-bedd, Burry Port, R.S.O., Carmarthen
 Phillips, Charles, Newport, Monmouth
 Prout, Wm. A., Blount, Sawbridgeworth, Herts
 Roberts, Roberts, The Firs, Chester
 Ramsden, Sir John Wm., Bart., Byram, Ferrybrigde, York
 Rossey, Wm., Llanelly, Carmarthenshire
 Rowell, Wm., Peterborough, Northamptonshire
 Smith, George, Fitz Farm, Aspatria, Cumberland
 Saunders, T. Chapman, Watercombe, Dorchester, Dorset
 Street, George, Maulden, Amphill, Bedfordshire
 Searson, Samuel, Peterborough, Northamptonshire
 Surman, Wm., Bushley, Tewkesbury
 Worrall, Edward, Sulham, Reading, Berks
 Woolley, Thomas, Newton Regis, Tamworth
 Workman, Henry, Coedkernew, Castletown, Cardiff.

FINANCES.—Major-General Viscount Bridport presented the report, from which it appeared that the Secretary's receipts during the past month had been examined, and were found correct. The balance in the hands of the bankers on April 30 was £1,595 3s. 6d., £2,000 remaining on deposit at interest.

JOURNAL.—Mr. Thompson (chairman) reported that Mr. C. G. Roberts, who greatly distinguished himself at the Society's educational examinations some years ago, had accepted the office of reporter of the trials of

implements at Cardiff. The committee recommended that copies of the publications of the Society be exchanged with the Agricultural Society of East Flanders. This report was adopted.

GENERAL, CARDIFF.—Lord Kesteven reported that the committee had arranged a programme of the Cardiff meeting, which they recommended for adoption by the Council. This report was adopted, and the programme of the Cardiff meeting ordered to be printed and circulated amongst the members of the Society in the usual manner.

JUDGES SELECTION.—Mr. Milward (chairman) reported that the judges of stock and implements had accepted the invitation of the Council in all classes. The committee, therefore, recommended that they be now formally appointed, and that an additional judge be appointed in the division which includes the classes for mountain sheep. With reference to the question put by the New South Wales Agricultural Society, as to the mode of judging stock, &c., by points, they could not recommend that plan for guiding the judges. This report was adopted, after an addition had been proposed by Mr. Jacob Wilson, seconded by Mr. Thompson, and carried by 16 votes against 15, to the effect that an additional judge of Welsh cattle be appointed.

EDUCATION.—Mr. J. Dent Dent, M.P., reported that the educational examinations had been held at the Society's rooms on the days from Tuesday, April 16, to Saturday, April 20, inclusive. The three candidates who had entered at the proper time, and eight of those who entered too late to compete for prizes, appeared and were examined. Mr. T. S. Minton was the only one of those who were eligible for prizes who succeeded in satisfying the examiners, and he gained a First-class Certificate, the Life Membership of the Society, and the Prize for Agriculture, in which subject he passed a very good examination. Of the other gentlemen, four passed and four failed. Mr. Brown, Mr. Champion, Mr. Asbdown, and Mr. Elwell obtained First-class Certificates, and with them the Life Membership of the Society. Dr. Voelcker had reported favourably of the papers in chemistry, which clearly indicated that the candidates had been well grounded in the principles of chemical science, and that even amongst those who failed, the failure had arisen more from want of extensive knowledge of the subject than from imperfect study of that which they had learnt. Professor Twisden, the Examiner in Mechanics and Land Surveying, had reported favourably as to the papers on the latter subject; in the former, Messrs. Elwell and Champion had passed thoroughly satisfactory examinations, and several other candidates had done fairly well, but the leading defects in almost all the papers were the absence of clear and concise statements of principles and matters of fact. Professor Morris, the Examiner in Geology, had remarked that it would be advisable for candidates to pay attention to the succession of the stratified rocks, their mineral characters and economical products, as well as the other special bearings of geology upon agriculture. The committee recommended that the thanks of the Council be given to the examiners for their valuable services, and that the usual fees be paid. This report was adopted.

SHOWYARD CONTRACTS.—Mr. Randell (chairman) re-

ported that the showyard works at Cardiff were progressing satisfactorily, and that the contractor was entitled to his first payment on account. The committee recommended the erection of a stand at the side of the horse ring, covered with canvas, to hold 600 persons, 400 at a charge of 1s. each, and 200 in the centre at a charge of 2s. each. This report was adopted.

SELECTION.—Mr. Thompson (chairman) reported the recommendation of the committee that the Earl of Cathcart be recommended to the general meeting as President for the ensuing year. This report having been adopted, the nomination of the Earl of Cathcart as President for 1872-3 was, on the motion of Mr. Thompson, seconded by Mr. Torr, unanimously adopted by the Council.

HOUSE LIST.—In conformity with the bye-laws the Council then arranged by ballot the following election list, to be recommended by them for adoption at the ensuing general meeting on the 22nd inst.:

ATTENDANCE FROM THE RISING OF THE OXFORD MEETING IN 1870, TO THE PRESENT TIME.

Names.	Monthly Councils.	Special Councils.	Weekly Councils.	Number of Meetings.	Attendances.
	Total 15.	Total 6.	Total 6.		
Amos, Charles Edwards, 5, Cedar's Road, Clapham Common, Surrey ...	3	...	...	39	17
Barthropp, Nathaniel George, Hacheston, Wickham Market, Suffolk ...	6	...	...	5	1
Booth, Thomas Christopher, Warlaby, Northallerton, Yorkshire ...	9	...	...	54	22
Bowly, Edward, Siddington House, Cirencester, Gloucestershire ...	10	...	...	20	9
Chaplin, Henry, M.P., Blankney Hall, Lincoln ...	...	...	...	...	...
Davies, David Reynolds, High Legh Hall, Knutsford, Cheshire ...	9	...	...	61	26
Druce, Joseph, Eynsham, Oxford ...	10	...	...	31	12
Edmonds, William John, Southrope House, Lechlade, Gloucestershire ...	8	...	...	40	13
Egerton, the Hon. Wilbraham, M.P. (elected Nov. 1, 1871), Rostherne Manor, Knutsford, Cheshire ...	2	...	...	...	...
Exeter, the Marquis of, K.G., Burghley House, Stamford, Lincolnshire ...	...	...	...	...	...
Hornsby, Richard, Spittlegate, Grant-ham ...	12	...	...	39	32
Hoskyns, Chandos Wren, M.P., Harewood, Ross, Herefordshire ...	7	...	...	56	19
Kesteven, Lord, Casewick, Stamford, Lincolnshire ...	8	...	...	15	7
Lowes, John Bennet, Rothamsted, St. Alban's, Herts ...	2	...	...	14	...
Leicester, Earl of (elected Feb. 7, 1872), Holkham Hall, Wells, Norfolk ...	1	...	...	...	...
Lichfield, Earl of, Shugborough, Staffordshire ...	6	...	...	36	13
Masfen, R. Hanbury (elected Feb. 1, 1871), Penleford, Wolverhampton, Staffordshire ...	7	...	...	31	9
Randell, Charles, Chadbury, Evesham, Worcestershire ...	13	...	...	71	65
Rawlence, James (elected Dec. 6, 1871), Bulbridge, Wilton, Salisbury, Wiltshire ...	1	...	...	...	...
Sanday, William, Radcliffe-on-Trent, Notts ...	2	...	...	31	...
Shuttleworth, Joseph, Hartsholme Hall, Lincoln ...	12	...	...	42	23
Statter, Thomas, Stand Hall, Whitefield, Manchester, Lancashire ...	4	...	...	5	...
Welby, William Earle, M.P., Newton House, Folkingham, Lincolnshire ...	9	...	...	15	9
Wells, William, M.P., Holmewood, Peterborough, Northamptonshire ...	13	...	...	62	59
Whitehead, Charles, Barming House, Maidstone, Kent ...	9	...	...	42	33

IMPLEMENTS.—Colonel Challoner (chairman) reported

the recommendation of the committee that the report of the consulting engineers, honorary director and secretary, as to the disposal of certain portions of the Society's testing machinery, be adopted, and that the objects named be disposed of on the best terms that the committee can obtain. This report was adopted.

VETERINARY.—Major-General Viscount Bridport (chairman) reported that a communication had been received from the Royal Veterinary College, stating that the governors, at a meeting held on April 9, took into consideration the veterinary privileges of members of the Royal Agricultural Society, as revised by the Council, and agreed to the same with the exception that the reports referred to in the last paragraph of the printed copy be made quarterly instead of half-yearly. This report was adopted, after Lord Bridport had drawn attention to the evidence of increased activity at the College afforded by this proposal to furnish quarterly reports, as well as by the recent appointment of Professor G. T. Brown as Lecturer on Physiology, Therapeutics, and Pharmacy, and of Dr. T. S. Cobbold, F.R.S., as Lecturer on Botany and Parasitic Diseases.

SPECIAL COMMITTEE ON RECEIPTS AND EXPENDITURE.—Lord Vernon (chairman) laid before the Council the report of this committee, and moved that it be printed, as well as the documents on which it is founded, and circulated amongst the members of the Council, so that it may be discussed at the Monthly Council in June. This proposal was seconded by Mr. Milward, and carried unanimously.

The report of the Inspection of Sites Committee having been read, the Council were favoured with the attendance of Mr. Backhouse, M.P., the Mayor of Darlington, and Mr. T. Parrington, as representatives of the town of Darlington; and of the Mayor and Town Clerk of Hull, with Mr. Bannister as representatives of the town of Hull. These gentlemen having answered the questions put to them by the Council, and further urged the claims of their respective localities, it was moved by Mr. Randell, and seconded by Mr. Milward, "That the Country Meeting of the Society for 1873 be held at Hull." It was then moved by Mr. M. W. Ridley, M.P., seconded by Mr. Wakefield, and supported by the Hon. H. G. Liddell, M.P., "That the Country Meeting of the Society for 1873 be held at Darlington." The claims of Darlington having been further upheld by Mr. Booth, Mr. Thompson, and Mr. Ransome; and those of Hull by Mr. Shuttleworth, Mr. Dent, Mr. Bowly, Mr. J. Wells, and Mr. Torr, it was finally decided by 27 votes against 14, that the Country Meeting for 1873 be held at Hull.

On the motion of Mr. B. T. Brandreth Gibbs, seconded by Lord Bridport, the cordial thanks of the Council were ordered to be conveyed to the authorities of Darlington and Newcastle for their invitation to the Society.

On the motion of Mr. Torr, seconded by Mr. Jacob Wilson, it was resolved that the Country Meeting for 1874 be held at some place in the district comprising the counties of Bedford, Cambridge, Essex, Hertford, Huntingdon, Norfolk, and Suffolk. Mr. Jabez Turner, thereupon gave notice that, at the Council meeting when the towns are nominated, he would move that Peterborough be allowed to compete as the representative town of the county of Huntingdon.

The report of the Council to the annual meeting, to be held on Wednesday, May 22, was prepared, and ordered to be printed.

AGRICULTURAL QUESTIONS AND AGRICULTURAL AGENCIES.

"An alliance of tenant-farmers, possessing as it would such an amount of capital and ability, must of necessity be very powerful, and would, I have no doubt, soon remove a great many of the grievances under which that class now suffer. The plan I propose is as follows: Let a meeting of those most interested in the matter be held in London, to decide on the mode of action to be taken, and a copy of the scheme proposed be freely circulated throughout Great Britain, inviting co-operation. I should suggest that until the present law is altered a fund be established for recouping any member (if he desires it) for loss that he may sustain from eviction, if due to any injustice on the part of the landlord; the name of the landlord to be published, with a request that no one again take the estate until compensation has been made. It may be said that the present Chambers of Agriculture supply all that is required by the tenant-farmers in this matter; but such is not the case, for while we have on the committee of those chambers the predominating influence of landlords, it is not likely we shall have subjects which the landlords *think* are opposed to their interests fairly discussed and represented. What we want is a union of tenant-farmers and their supporters. It is quite a mistake to say that the interests of the landlords and tenants are identical." So said "A Western Tenant-Farmer who encloses his address, and will be only too pleased to aid this movement" in our Paper of a fortnight since; and now "A North-Devon Farmer" in support of our Cornwall correspondent says in *The Western Times*: "I quite agree with many of the remarks made. But why wait for a meeting to be held in the great metropolis first? Let meetings be held in convenient places throughout the country that their wants may be made known. Almost every trade and profession has its union, and has shown that there is a benefit derived from it. But the tenant-farmer, alas! what is he? A machine to be kept in motion for other people's advantage. The present Agricultural Chambers, as regards the tenant and working farmer, are a little better than a sham." In our paper of this day, E. P. K., writing from Wiltshire, asks "is it right that, notwithstanding the increased rate of wages and high rents, tenants should have their crops eaten up by rabbits and hares without a chance of compensation? To obviate this great loss, I would propose that meetings should be called in all the chief market towns to discuss this important question, and when the great evils which arise from these laws are brought to light, I believe the farmers will eventually achieve as great a victory as the labourers." A committee of the House of Commons is now making inquiry into the action of the Game Laws, and the committee of the Farmers' Club is about to invite its members to give evidence "more particularly on the practice of letting shootings separate from farms." Mr. James Howard will shortly call the attention of the House of Commons to the insecurity of the tenant-farmers' capital, and his want of freedom in cultivation. A general meeting of the Essex Chamber of Agriculture has just declared that the present state of the law as to entail and strict settlement of land discourages the application of capital to the cultivation of the soil. The East Suffolk Chamber of Agriculture "regrets that the Budget has been brought forward and a large surplus disposed of without a deputation having waited upon the Chancellor of the Exchequer with a view to the repeal of the Malt-tax." And Mr.

Albert Pell, M.P., is, according to his own account, sometimes called "Cattle-plague Pell."

On Tuesday, May 7, the annual dinner of the Central Chamber of Agriculture was held, at the London Tavern, when the attendance was very limited, and the speeches were very numerous. The occasion, however, was essentially a business meeting, and with plenty to talk over it would be manifestly unfair to complain of the time spent in this way. At the present moment, as we have just shown, the condition of the tenant-farmer actually bristles with points, and as some of these are coming before Parliament, the greater of course the call on the Central Chamber of Agriculture to deal with such subjects. A Game-Law Committee, of which Sir Michael Beach, Mr. Sewell Read, Mr. Albert Pell, and Mr. Muntz are members, is now taking evidence, and at the dinner of the Central Chamber of Agriculture the game evil was never once mentioned. A recent eviction has drawn some very sensational attention to the unsatisfactory terms upon which the tenant-farmer pretty generally continues his occupation, as the insecurity of his position is about to be brought forward as a resolution in the House of Commons; and at the dinner of the Central Chamber of Agriculture Tenant-Right was never once mentioned. The Malt-Tax has long been regarded as a farmers' burden, and when at the dinner of the Central Chamber of Agriculture some one in parenthesis ventured to suggest such a question for consideration it was shunted with all convenient speed. Mr. Pell apparently rejoices in the name of "Cattle-Plague Pell," because the Chamber of Agriculture was instituted to look after this matter in Parliament, a duty which it forthwith handed over to the Home Cattle Defence Association.

It would be well if some careful study were bestowed on the addresses delivered at the dinner of the Central Chamber of Agriculture, a report to which we give infinite space. Mr. Masfen protested against lukewarmness, but beyond local taxation he does not appear to have touched on a farmers' grievance. Sir Michael Hicks and Colonel Grove were as charmingly obscure, as there is scarcely a word worth remembrance in all the "amusing" generalities to which they gave utterance. Sir Massey Lopes advanced the more startling proposition that the Local Taxation Committee is the creature of the Chamber of Agriculture, whereas from the manner in which not merely at this dinner, but on many other occasions, local taxation has been suffered to swallow up other subjects, it is surely clear enough that the Chamber of Agriculture is rather the creature of the Local Taxation Committee. Mr. Storer maintained that "the object of the Chamber of Agriculture was to advance the lauded interest of the country by every means," a somewhat indefinite definition which possibly suggests more than it says; and Mr. Sewell Read had heard it remarked, "that the lauded interest was too much represented in the Chambers of Agriculture; but a proof to the contrary was the fact that not a single landowner was called upon to respond to the toast," one of the last on the list; while by far the greater part of this long, dull evening had been occupied by the chairman, Mr. Heneage, Lord Mahon, M.P., Colonel Paget, M.P., Colonel Parker, M.P., Sir Michael Hicks Beach, M.P., Colonel Grove, M.P., Mr. Corrance, M.P., Mr. Pell, M.P., Sir Massey Lopes, M.P., Mr. Muntz, M.P., and Mr. Storer. What more could Mr. Read wish for, or

what better audience to appreciate the "genteel" tone in which his own speech was pitched? There were no vulgarities here about Tenant-Right or game abuses or encumbered estates or going in against the Malt-tax, but everything was rose-tinted to local taxation, which, as somebody said, is quite as much a town as a country question. The Cornish farmer declares in so many words that the predominating influence of the landlords will tend to prevent farmers' subjects being *fairly* discussed in such places, and the Devon farmer declares that as regards the tenant and working farmers these Chambers are little

better than a sham. At the dinner Mr. Whitaker was "disappointed at the scanty number of agriculturists present;" but from the turn of the proceedings it is doubtful whether they had really any business there. Such as were must have felt very much as did the couple of honest countrymen who on coming up to London went to the play for the first time in their lives. Naturally they went early enough to hear the overture, but on two or three of the actors walking on to open the piece one whispered to the other, "I think we had better go now, as these gentlemen seem to be talking over their own affairs."

THE CENTRAL CHAMBER OF AGRICULTURE.

A special general meeting of the Chamber was held at the Salisbury Hotel, on Tuesday, May 7, Mr. E. Heueage in the chair.

Sir MASSEY LOPES, M.P., read the following report:—

In presenting their report the local taxation committee are glad to be able to announce the triumphant success which attended the motion of the chairman in the House of Commons on the 16th April last. The injustice which for three years your committee have endeavoured to ventilate has now been formally admitted by the House. By a majority of 100 the necessity for prompt redress has been declared, and the specific relief claimed upon this occasion sanctioned. Local taxation reform is thus at last unmistakably placed in the foremost rank of those social and administrative problems whose solution is imperatively demanded by the country. The injustice of the cause so long advocated by your committee was abundantly proved by the course of the debate; and the arguments so frequently urged by them were distinctly endorsed, and so ably handled on both sides of the House, as to convince all who gave an unprejudiced consideration to the issues involved. The thanks of your committee are especially due to the 259 members of Parliament, of all shades of political opinion, whose votes overcame the resistance which was offered on this, as on previous occasions, by the Government to any practical measure of relief to the overburdened ratepayers. A full and corrected report of the debate of the 16th April, together with an analysis of the division list, and extracts from the opinions of the press, has been issued by your committee. Copies have been sent by them into every parish in England and Wales, addressed in each case to the guardian, and to all municipal boroughs, addressed to the mayor. Chairmen of boards of guardians have also been furnished with these reports, and copies are in course of issue to chairmen of quarter sessions and clerks of the peace. Your committee have been able also to supply several local Chambers of Agriculture, and individuals, at cost price, with copies for a still further distribution; the Lincolnshire Chamber alone ordering some 2,000 copies. Your committee are anxious to receive any suggestions as to the best means of circulating among town ratepayers the report of this most important debate. They are convinced that the amount of support they have hitherto received from householders would be greatly augmented were they enabled to disseminate in urban districts the information and arguments which, with the help of Chambers of Agriculture, they have been able to circulate so widely in the country. The Government have not at present given any indication of the course they intend to take in the now altered position of the local taxation question. Your committee would, however, observe that, notwithstanding the very emphatic opinion expressed by the House in the recent division, a Bill has been introduced into the House of Lords by the Government "To Regulate the Sale of Intoxicating Liquors," some of the provisions of which entail an addition to the charge for police now unjustly borne by the ratepayers. This is unmistakably the effect of clauses 31 and 36 of this bill, which proposes the appointment of additional constables as public-house inspectors. A second attempt by the Chairman of your committee to ascertain the intentions of the Government with regard to the assistance to be given by the Treasury towards new sanitary expenses has been again evaded by Mr. Stansfeld's declining to make any statement on

the subject until after going into committee on the Public Health Bill. In the present position of public business in the House of Commons a considerable period is likely to elapse before this measure is again brought under the consideration of the House. Your committee have undertaken to prepare the draft of a bill making provision for an annual general return of all sums raised and expended locally by rate-administering bodies. Mr. Pell, Mr. Read, and the secretary have had a long conference with Mr. Stansfeld on this subject, the result of which was that the Local Government Board have themselves undertaken to see how far the materials at present in their hands are available for an abstract of this nature, and the details of the scheme proposed by your committee are now under their consideration. A return, purporting to show the expenditure in cities and boroughs for police and the administration of justice—moved for some time since by the Chairman of your committee—has only just been issued. It proves to be even more faulty and defective than the similar return recently obtained for counties. No attempt is made in this return to give any account of expenditure incurred for lunatics in boroughs, although this was one of the special objects with reference to which information was asked by the Chairman. No figures are given under the two remaining heads of expenditure for any period previous to the last four years, although since the year 1835 the Home Office has been in full possession of power to compel such accounts to be annually furnished. The new clause proposed by Mr. Fawcett to be added to the Parliamentary and Municipal Elections Bill, throwing on the rates the cost of elections, has been signally defeated by a majority of 32. In spite therefore of the support given by the Government to this proposal, the House of Commons has declined to place this additional burden on the rates, the incidence of which they have so recently admitted to be unjust. While your Committee are glad to be able to congratulate the Council on their recent success, they feel that they must on no account relax their interest and energy in the work before them. It will be their duty to maintain a careful watch on the progress of those measures affecting ratepayers to which they directed attention in their last report. It will be their anxious care also to see that the clearly-expressed opinion of the House of Commons is not evaded or disregarded by the Government; and they ask the co-operation of the Council in carrying to a successful issue the struggle for justice to occupiers and owners alike of land and houses, which has now been so auspiciously commenced.

MASSEY LOPES, Chairman.

On the motion of Mr. HODSOLL (Keut), seconded by Mr. NEILD (Manchester), the Chamber voted by acclamation, and amidst much cheering, its thanks to Sir Massey Lopes for the able and devoted manner in which he had fought the battle of the ratepayers both in and out of Parliament, and to the Executive Committees of the various Chambers for their valuable co-operation; and the compliment was briefly acknowledged by Sir Massey Lopes.

Mr. WOODWARD (Worcestershire) moved, and Mr. CALDECOTT (Warwickshire) seconded, "That it is desirable that the Government should submit to Parliament, previous to the introduction of the Budget, in each year, a statement of the whole amount paid in local rates throughout England and Wales, in order that local taxation may be compared with the

imperial revenue; and that this meeting requests the Council to take immediate steps to support the Bill for this object which has been drafted by the local taxation committee."

Mr. MCGEACHEY (Hertfordshire) said it was only natural that the Chamber should view with satisfaction the victory lately achieved under the leadership of Sir Massey Lopes in the House of Commons, but gentlemen seemed hardly to be aware that, by extending those local rates over a wider area of property, they must of necessity call attention to the fact that, within the last 10 years, the rural police had been largely employed under the poaching prevention act for the preservation of game, and that thereby a considerable additional expenditure was incurred. If, therefore, the items with respect to the cost of the county police were published, it was not likely that people who lived in the back streets of towns would be very willing to continue paying what they now did, for the employment of the police on such a duty. He quite agreed that the rating question was in an unsatisfactory state, but if they wished to deal with it fairly, the Council should consult the Chamber whether it was not desirable, with a view to effecting a really useful reform in the system of local taxation, to put upon their programme a proposal to relieve the landed interest of the odium which unquestionably attached to them, let them like it or not, through the Poaching Prevention Act.

Mr. WRITTLE (West Gloucestershire) said that the police could only apprehend a man found with game in his possession on the highway. He believed the police were only required to look to poaching so far as they could do so on the highway. They could only apprehend persons having about them game, or implements for taking game, on the public highway. He had never taken a different view of the Poaching Prevention Act than that.

Mr. MCGEACHEY said Mr. Writtle was perfectly right upon his own facts, but they were not his (Mr. McGeachy's).

The resolution was then agreed to.

Mr. R. FOWLER (Dorsetshire) moved, "That the members present pledge themselves to use their best exertions to raise funds for carrying Local Taxation Reform to a successful issue, and regret that the liberal appeal of Sir Massey Lopes has been responded to so inadequately, considering the magnitude of the interests concerned." In doing so he observed that, instead of being content with contributing a paltry £5 or £10 to the fund, and priding themselves on their generosity, more with tens or hundreds of thousands derived from the land, ought to come down with their £500 or £1,000.

Mr. GENGE ANDREWS (Somersetshire) seconded the motion, and presented to the Chamber the following series of resolutions adopted at a meeting of the Council of the Somerset Chamber of Agriculture and County Association of Ratepayers, on Saturday, the 4th inst.:

1. That this Council presents its best thanks to Sir Massey Lopes, Bart., M.P., for the great ability, tact, and perseverance with which he has secured in the House of Commons a decisive majority of 100 votes in favour of placing a portion of local taxation on the Consolidated Fund, and congratulates the ratepayers of Somerset on having supported the motion of the hon. baronet by presenting to the House, through their county members, upwards of 200 well-signed parochial petitions.
2. That in the opinion of this Council neither the present nor any future Government can safely refuse—after the recent vote of the House of Commons—such a radical reform of the incidence of local taxation as will remove all exemptions from the poor and highway rate assessments.
3. That sound policy dictates to the ratepayers that they should organise far more extensively than they have yet done, in counties, towns, and boroughs; raise larger funds, and agitate this question until their representatives in Parliament are convinced that nothing short of an extension of the area of the rate to all income arising from real and personal property will satisfy the just demands of those classes whose rates are at present far more than doubled by the unjust exemption of income arising from personal property.
4. That equality in taxation, imperial and local, is a natural right; and neither lapse of time nor any assumed difficulties of administration, central or local, can be advanced as justifying exemptions from taxes raised for the common good of all classes.
5. That this Council—and, as it is justified in believing the majority of the ratepayers of this and other counties—will continue to agitate until charges, now called local, are placed on imperial funds; and until all income is fairly rated to the future assessments

made for the relief of the poor, the maintenance of the highways, and the payment of other charges which are at present or in future may be placed on those assessments.

The resolution was supported by Mr. Storer (Nottinghamshire), Mr. Walker (Nottinghamshire), Mr. Masfeu (Staffordshire), and Mr. Webb (Worcestershire), and agreed to.

Mr. WHITAKER proposed "That this meeting entirely approves and adopts the subjoined resolution passed by the council on the 16th of April, and urges the council as its executive to employ every available means to cause an adequate proportion of the expenses involved in the Public Health Bill to be made chargeable on the imperial taxes.—That this Chamber, while sensible of the urgent necessity for sanitary legislation, strongly disapproves of much of the Government Public Health Bill, more especially the extraordinary powers it confers upon the Local Government Board, and the want of provision for consolidating the existing laws, and considers that the attempt to saddle the whole of the unlimited outlay for sanitary expenditure upon owners and occupiers of property at present rateable should meet with the most determined opposition." He freely admitted that sanitary reform was absolutely necessary, and that the country generally called for it; but if the measure was to be encumbered with a large number of officials paid at the cost of one description of property he felt that they were bound to resist it. The scheme of the Government, moreover, was arbitrary to the extent of seriously interfering with the liberty of the subject.

Mr. A. STARTIN (Warwickshire) seconded the resolution, and said that after the late division in the House of Commons on the motion of Sir M. Lopes, he was satisfied that no addition to the present rating would be submitted to by the community at large. As to the sanitary bill of the Government, he considered that the public health was a question of national concern, for disease was no respecter of persons. Further, he agreed with what fell from Mr. Butt in the House of Commons the other night respecting Boards. Mr. Butt said that Ireland should not be governed by Boards; for what was the effect of Boards? Simply to dilute responsibility. The individual members felt no responsibility, as all knew who were members of Boards of Guardians. On the whole he had come to the conclusion that Government Boards had not been a success; in short, he thought the country had been a little over-boarded.

After some further discussion, in which Mr. Corrance, M.P., Mr. Webb, and Mr. D. Long took part, the resolution was adopted.

Mr. MUNTZ (Warwickshire) proposed: "That this meeting has learned with regret that Mr. Stansfeld declines to state how and to what extent he proposes to provide the necessary means for carrying out the enactments of the Public Health Bill after the resolution of the House of Commons on the 16th of April, and considers that, unless satisfactory information is given previous to going into committee, the bill should be opposed by all friends of local taxation reform."

Mr. H. BIDDELL (Suffolk) seconded the proposition, and observed that, if the Chamber would prevent another burden from falling upon the local rates, they must join in energetically remonstrating. He should regret to see any fresh obstacle raised to the improvement of the sanitary condition of the country; but he insisted that they had a right to know who would have to pay for the improvement, and what proportion of the expense was to be borne by the agricultural interest.

Mr. GROVE (Monmouthshire) expressed a doubt as to the expediency of adopting such a resolution, because it seemed to pledge the Chamber to support a particular line of Parliamentary tactics. The same power that had carried the motion of Sir M. Lopes in the House of Commons would be sufficient, when the House was in committee, to reject any proposal made there for levying additional local taxation to carry out a public health Act. He should prefer, therefore, to let the matter take its course in the House, and that the Chamber should content itself with the expression of a hope that those members of Parliament who had voted for the motion of Sir Massey would continue their support to him in the course of policy which he might pursue in committee.

Mr. W. EGERTON, M.P., avowed that he should not like to pledge himself to oppose the Public Health Bill altogether, merely on account of the question of local taxation. Besides, it would be difficult to pass the bill at all this session, and he

thought it would be far better to leave the question open than to set forth any particular grounds why the measure should be opposed in committee.

Mr. G. ANDREWS concurred with Mr. Egerton that it would be wise not to pass the resolution. He had always understood that the Chamber was determined never to consent to any addition to local taxation until its incidence had been altered, but the resolution practically invited the Government to place a portion of the charge under the Public Health Bill upon the poor-rate, which would be utterly at variance with the previously expressed views of the Chamber.

Mr. NEILD, too, thought, with previous speakers, that the Chamber had better wait and not anticipate evil. He believed that the resolution rather invited taxation.

Mr. GROVE said that if they desired local control, they could only have it through local taxation. Should the resolution carried by Sir M. Lopes have any practical effect it would be to take off two-millions-and-a-half of local taxation, in which case the rate-payers would to that extent be benefited. Supposing that were done, then there would not be the same valid reason to object to a small charge for sanitary reform being placed upon local taxation, for a certain amount of local control would thus be retained. If, however, it were made wholly an imperial charge, the Government would have sole control, and find their own inspectors. The result would be the establishment of a system of centralization which he was sure no member of the Chamber would like to see. To secure any share of local control, therefore, it was necessary that a certain portion of the charge should be placed upon the local rates, though the main portion should come from imperial sources.

Mr. ANDREWS: But if it were borne by imperial taxation, agriculturists would only have to pay their fair share in common with the rest of the community.

Sir M. LOPES regarded the resolution in this light. Mr. Stansfeld had promised to make a statement, but if that were made after the House met in committee it would be useless, whereas if he were compelled to make it previously the friends of local taxation reform would be able to shape their course accordingly.

The resolution on being put from the chair, was carried with but two dissentients.

Mr. WEBB moved, and Mr. COOPER (West Riding of Yorkshire) seconded: "That this meeting expresses its dissatisfaction that no portion of the surplus was applied by the Chancellor of the Exchequer to reducing the burdens which press upon agriculture."

Mr. NEVILLE (Staffordshire) dwelt briefly upon the injustice of the malt duty to agricultural industry, and urged that, as this had been allowed by the Chancellor of the Exchequer and other members of the Government, some portion of the surplus revenue for this current year ought to have been applied to the reduction of this impost.

Mr. HICKS (Cambridgeshire) pointed out that the statement in the resolution was not correct; for there was no surplus. What was termed "surplus" was no more than the proceeds of the unjust taxation of last year, and but for the second income-tax of 1871, there would have been no surplus worth mention in 1872. He thought they had better ask that, in future, when there was a real surplus, some part of it should be allotted to the relief of agriculture. Having been robbed of 2d. in the pound as income tax last year, he must say that he could not regret that the robbery had not been perpetuated this.

Ultimately, after some remarks from Mr. Arkell (Wilts), Mr. Webb, Mr. T. Beardall (Notts), Mr. Biddell, and Mr. Storer, the resolution was adopted, and,

The meeting separated with a vote of thanks to Mr. Heneage, the chairman.

The Annual Dinner took place on the Tuesday evening, at the London Tavern, with Mr. E. Heneage in the chair, and Mr. H. Neild as vice-chairman. The attendance was very scanty.

After the customary loyal toasts,

Mr. R. H. MASEN proposed "The Houses of Parliament." He said he should be extremely sorry to see the time when any attempt was made to disturb the House of Lords. As to the House of Commons, there were many of its members present for whom agriculturists entertained the greatest regard,

and that regard had been increased by the way in which during the present session of Parliament they had watched the interests of agriculture. He might instance the great and important victory won by Sir Massey Lopes on the 8th of April, and the manner in which he had supported the cause of all classes and property in the kingdom entitled him to their warmest gratitude. He (Mr. Masfen) might say that he cared not personally on which side of the House a member sat so long as he gave a true and faithful representation to the interests represented by the Chamber. He valued as much as any man the importance of party claims, but if a truant child misbehaved itself it would be the duty of the parent to correct him; and so if after they had sent a certain member to Parliament his constituents found that he did his duties with a degree of supineness, or ran away from them altogether, when the next general election came round it was their duty to let him know he stood as much in need of correction as the truant child. The Chamber was bound to thank all the members of Parliament present, for they were always to be found at their post at the proper time, determined to go straight. The duty of the electors was first to select the men most likely to serve with honour to themselves and with honesty and integrity to those whom they represented; but it was further the duty of the latter to exercise constant watchfulness lest the representatives turned tail. The moment anyone exhibited signs of lukewarmness, or indications that he had entered Parliament to seek his own advantage, it was time for the agriculturists to turn round and say to him that, party man or no party man, he was no longer worthy of their confidence. Agriculturists, he quite agreed, must be in their future operations moderate and consistent.

Sir MICHAEL HICKS BEACH, M.P., regretted that there was no noble lord present to return thanks for the Upper House. Since the dinner of last year there had been many rumours abroad as to the speedy abolition of the House of Lords, but he would venture to prophecy that so long as that distinguished body performed their work in the manner in which it was at present performed so long would they have, not the respect of the country only, but the confidence of the people. It was sometimes urged against the House of Lords that they represented too much the interest of the land; but that was the last fault which should be found with them in a Chamber of Agriculture. It was sometimes urged against them that they neglected various duties as individuals; but he was confident that as agriculturists they knew full well that if there were any men throughout the country who in their individual capacity did their best to promote the interests of agriculture, they should look for those men amidst the members of the House of Lords. As regarded the House of Commons, he confessed he spoke with some little diffidence on behalf of that assembly. Not only might he claim to be one of the youngest members present, but he was able to say something which perhaps a member of the House of Commons ran some risk in saying. They had been kind enough to drink the health of the House of Commons. For his own part he must confess he did not at all concur in the wish (laughter). Nothing would give him greater pleasure than to see the House of Commons, which was, as believed, one of the worst ever returned in this country, and which at present at any rate did not represent the feelings of the people of England, arriving at its final dissolution (cheers). When the time arrived, and he believed it would not be long delayed, it would be for the country to consider what the next House of Commons should be. As a member of the House of Commons he would take the liberty of giving his friends one piece of advice—to watch carefully the course of their representatives in Parliament upon such questions as that of local taxation or the public health. He was a party man himself, and they would hardly believe him, perhaps, if he said he did not attach much importance to party ties; but he would ask them as agriculturists to consider not so much whether a man was a Liberal or a Conservative as whether he was sound upon those questions which agriculturists thought of most practical importance to the well-being of the country. Reference had been made to the victory so recently achieved by Sir Massey Lopes on the question of local taxation. That was to his (Sir Michael's) mind about the only thing for which the agriculturists had to thank the present House of Commons. He asked the members of the Chamber, as their constituents, to watch that they, under their able leader, did their best to give effect to

that victory, while the present House of Commons endeavoured to derive every appreciable benefit from that splendid majority of 100 which Sir Massey Lopes attained. There was another point of detail equally important. He would be the last to deny that sanitary improvement was one of the greatest needs of the present time. It was one of the most important measures which demanded the consideration of the House of Commons; but it would be for the representatives of agriculture in the House of Commons to take care that in achieving sanitary improvements they did not land us in worse places. It was well said the other day by the Bishop of Peterborough that he would sooner see the country free than the country sober. He should like, if he might parody the right rev. prelate's words, to say he would sooner see the country free than the country clean. Sanitary improvement was a great thing; but he should be sorry to see sanitary improvement achieved at the cost of meddlesome and officious central interference, and he should be sorry to see those improvements carried out if additional expenditure was to be placed upon one portion only of the shoulders of the community. It was for the parliamentary representatives of the agricultural interest, therefore, to take care that these new evils were not brought about in an attempt by Parliament to deal with the sanitary question, and it was for the represented to see that their representatives did their duty in the matter; and for his own part he must add that he believed nothing would help them so much as members of Parliament in this and all other kindred matters as regular and careful attendance at the meetings of the Chambers of Agriculture. There they were brought face to face with men fresh from the constituencies whom they represented, and those members of Parliament who were, perhaps, somewhat jaded and fatigued by parliamentary work were, so to speak, freshened up by the sight of their healthy country faces, and reinvigorated by the clear and intelligent views they took upon important questions that happened to be uppermost. He had always expressed, and always felt the greatest pleasure in being present at such meetings. This was the first dinner of the Chamber he had been able to attend, but he sincerely hoped it would not be the last. In conclusion, he would only say that he hoped the Chambers would in future be no less useful and powerful in political life than they had been during the past year.

Col. GROVE, M.P., also responded for the House of Commons. He was placed in the position of sitting on the outside of the House to that occupied by Sir Michael Beach, and the Chamber would therefore hardly expect him to concur in all the remarks which had just been heard. Representing the very large constituency of South Wilts as he had done for years, and this being the second Parliament in which he had sat in the House of Commons, he must be allowed to say that, so far from the present being the worst Parliament of our times, it was by far the best he ever remembered. The Irish Land Bill, the Irish Church Bill, and the Army Organization measure were Bills of which any Government might be proud ("Oh"), and although they created a good deal of opposition at the time of their introduction, the country was now satisfied with them (No, no). He should not, of course, have ventured to make these remarks, had not the hon. baronet who preceded him said what he did of the present House of Commons. He must confess that the Liberal party with whom he had been acting had not been in the happy state of unity he could have desired. If the Government could get beyond Whitsuntide it was generally safe for the session, and no doubt if they were in office again next session they would somewhat retrieve their lost popularity. There could, at any rate, be no doubt that the present House of Commons represented the general feelings of the country (No, no). As a conscientious Liberal, he had always supported the motion brought forward annually by Sir Massey Lopes, whom he congratulated on his recent victory. Sanitary reform he held to be a very important matter, and he had always been a consistent supporter of it. As to the Bishop of Peterborough's epigram and Sir Michael Beach's parody, he (Col. Grove) could not see why the country should not be free, clean, and sober at one and the same time. In the agricultural districts some of the cottages, the agricultural buildings, and the drains were something frightful to see, the fault attaching to the small freeholders rather than to the landlords.

Mr. CORRANCE, M.P., proposed "Prosperity to the Central and Associated Chambers of Agriculture." He asked them to drink prosperity to an association which, take what view they might of it, had not been towards themselves unpro-

ductive of profit. He remembered about seven years ago, when they as agriculturists filled a very different place in the country. Politically, the time was one of great depression, and he might say something of the same kind with regard to the agricultural interest, for it was the time of the cattle-plague. Out of evil, however, he was happy to say came good, for they were stimulated by the depressing state of things he had described to establish farmers' clubs and associations, greatly through the aid of his hon. friend Mr. Pell, whose name he would couple with the toast (cheers). Those powerful associations forced upon an unworthy Government and an unwilling House of Parliament a measure which at last rescued the agriculturists from the miserable position into which they had fallen. The triumphs of the agricultural interest, it must be confessed, had been "few and far between." The cattle-plague certainly was one of their opportunities, and Sir Massey Lopes's victory was another. The egg had now been laid, but it must be set upon before it would produce a duck, and their friend Sir Massey Lopes was a very devil to sit. Agriculturists might now be said to have gone from times of depression to times which wore a more favourable aspect. He warned them that there might still be times of depression, and although they, by their associations, had assumed a position which he trusted might lead to future success, there were imminent dangers to be guarded against in the future. But it was his firm belief the friends of the agricultural interest would find a power in these associated Chambers that, well conducted and perseveringly applied, would protect them from all harm.

Mr. A. PELL, M.P., said he was sometimes called "Cattle-plague Pell," but he had no objection, because he always reflected that that fearful disorder from which England suffered was not entirely productive of evil, because from it sprang the Associated Chambers of Agriculture, whose existence and continued success they were met to celebrate that night. It was his duty, as well as his pleasure, to thank the Chamber for the hearty manner in which the toast had been received, although they were drinking their own healths and success to an undertaking in which they were all engaged. He, in common with other gentlemen who had spoken, might regret that they had not a more distinguished and numerous company present, but there were good reasons for the absence of those whom they might reasonably have expected to see, and who were willing and desirous to attend had it been, as in many instances he knew it was, possible. He wished, for example, to make a special apology for an old and valued friend, who had sent his regrets and sympathies—he referred to Mr. Newdegate. These Chambers of Agriculture filled a very useful and important position amongst the societies which were supposed to represent the varied interests of husbandry. They had side by side with them the Farmers' Club (cheers), composed mainly of tenant-farmers and a small representation of the owners of land. On the other side, they had the Royal Agricultural Society, whose council was composed of men distinguished for their large possessions and the useful way in which they applied them. The Chamber of Agriculture filled a middle position. It was composed, and might it long continue to be composed, of those who owned the soil and those who cultivated it. He should be very glad, for his part, if they could add to it those who absolutely tilled the soil by their manual labour. This led him to a subject which had really had more importance given to it of late than it deserved by the press, which he supposed must have been at a loss what to write upon at the time it introduced it. He referred, and with considerable regret, to the very poor way in which the agricultural labourers had been represented throughout the country by those who pretended to be their very warm friends. At any rate, he might, in connection with this subject, plead for practical farmers in the constitution of their associations. They made it a rule to select their chairman from both sides of the House—a Tory one year, and a Radical the next, and he was bound to say that whether a Tory or a Radical filled it, equal satisfaction was given, and the business was equally conducted with ability.

Mr. C. WHITAKER being called upon to respond for the Chamber of Agriculture, begged leave to urge upon his friends around the necessity of unanimity. It was clear the associated chambers were making a certain degree of progress; but, however satisfactory it might appear to be from the observa-

tions of previous speakers, it was not such an advance as they might make, and it was their duty to make. It was alike the interest of the landlord and of the tenant-farmer to join the chambers of their particular counties, and to render all the assistance they possibly could in the movement which was being made by members of Parliament, under the able guidance of Sir Massey Lopes, for obtaining that justice which, as a class, they were very far from possessing at present. Much of this might be traced to the fault of the rural districts in not rendering more sufficient service and assistance to the central chambers, and in otherwise letting themselves to further the objects which the associations had in view. He could not look round the room without being disappointed at the scanty number of agriculturists present. It was imagined by many that the members of Parliament were to do all the work; but nothing was so irksome to a member of Parliament as to feel that in the day of need he was deserted by his constituents. It was the duty of the constituencies not only to return members to Parliament who would look after their interests, but to support those members in their exertions to carry out the objects for the promotion of which they had been returned. He regretted that his own Chamber had not rendered more assistance to the Central Chamber. It was not the fault of the tenant-farmers, for they had certainly exerted themselves to the best of their power. They had supplied subscriptions in the most liberal manner; but at a moment like this he felt that the movement in which they were engaged deserved the strenuous support of every landowner and every householder in the country. He believed the day was not far distant when the Chambers of Commerce would unite with the Chambers of Agriculture to obtain an equitable adjustment of local taxation. If those Chambers confined themselves to a few important subjects instead of attempting, as they did, to embrace a large number, they would be much more likely to attain their ends, than by going into a wide field of politics which produced no really practical results. As regarded the relations of the Whigs and the Tories he hoped the members of the association would, in the first place, look to those who were earnest in obtaining justice for the agricultural interest.

Mr. STORER also returned thanks. He was afraid gentlemen representing the landed interests sometimes took exception to them (the chambers of agriculture) under the idea that something of a party end was kept in view—something prejudicial to the land. On the contrary, the object of these associations was to advance the landed interest of the country by every means in their power, and to do nothing whatever of a party nature. He was firmly convinced that unless gentlemen of all parties and all classes combined on great agricultural questions very little would be accomplished. There were many questions which must engage their attention (A Voice: "Yes, the Malt-tax.") The malt-tax, no doubt, was one of them; but in that, as in all other questions, what was wanted above everything was that the interest of the agricultural classes should be thoroughly aroused. The labour question was a difficult one just now, but it must be met fully and fairly. The difficulty would vanish if farmers met more together in their own localities to dispel delusions which were created by interested agitators. Why should not farmers make an effort to meet their labourers on fair terms, and, in those counties where the wages had been below what men could live upon, advance the pay of their men honestly, or at least make an attempt to come to some terms? (cheers). At one time, before Prince Albert's model cottages were established, he knew of instances where the labourers were exceedingly ill-used. He could give instances in which men walked six miles a day to their work, the result being that in the course of 30 or 40 years a man had walked a distance equal to the circumnavigation of the globe. On the other hand, there were many counties where the labourers had been exceedingly well located. On the whole, he most conscientiously believed that the labourers of the country had no better friends than the farmers, who, as a rule, did their best to meet the evils of poverty. He would further assert, that the condition of the labourers in rural districts bore comparison with that of the labourers of the artisan towns (Hear, hear). When an agricultural labourer was in distress, he had no better friend than his employer and the clergyman of the parish, to whom he applied for and found relief and assistance,

which he never could get in a town (cheers). The labourer was treated not as a "hand," but as a workman and friend.

Mr. C. WALFORD proposed the health of the "Local Taxation Committee," coupled with the name of Sir Massey Lopes (cheers). The question of local taxation had been before the Chambers for some years, but he was only during the present Session of Parliament that he had received that warm attention and welcome reception which must be so gratifying to Sir Massey Lopes, who was to respond to the toast (cheers). One of the means by which the hon. baronet obtained his large majority, was beyond question the manner in which he was treated by the Central Chamber of Agriculture and all whom it represented. There was no subject of more importance just now for the local chambers than local taxation. The local tenantry and residents felt that they had in the landlords and tenants combined an amount of sagacity and practical experience and real knowledge on the subject, which entitled them to the full confidence of the nation.

SIR MASSEY LOPES, who was received with prolonged cheers, heartily thanked the company for the warmth of their reception of himself personally, and for the hearty way in which they had done honour to the toast. On behalf of the Committee he could assure the Central Chamber they were proud of the appreciation and confidence manifested towards them. It was gratifying to him that the humble part he had played in the House of Commons should be thus acknowledged; but as chairman of the Local Taxation Committee he did not take the slightest credit for the great victory which had been achieved. It was his good fortune to have been associated with a number of gentlemen on the committee who assisted him, and there was none more able and hard-working than their friend Mr. Pell. A sounder friend in politics on the ordinary relations of life he had never met with. Nor, of course, could he omit mention of the name of Mr. Clare Sewell Read; and, without wishing to draw invidious distinctions, he would merely say that none could work more heartily than these gentlemen had worked in that great question. It was in 1868 that he first ventured to introduce the subject of local taxation into the House of Commons, feeling at the time that it was perfectly useless to hope for success unless he was backed up by a large organisation out of doors. It was on this account that he ventured in the following year to propose to the chambers of agriculture that they should form a local taxation committee. This was appointed in 1869, and that committee during its short existence had assuredly achieved a success which he might truthfully describe as unparalleled and unexampled, considering the vast issues and interests that were involved, and the vast amount of prejudice against which they had to contend. He was not going to favour the company with a lecture on local taxation, for they must, he should fancy, be almost sick of the subject; he would merely say that no man unless he studied the subject could form any idea of the immense difficulties and intricacies of that great question. It was hydra-like, it had a thousand heads; it was a sort of cancer which had been eating for years into our political and social system, and at one time it seemed almost impossible to stay its progress. All they had done was this: they had endeavoured to be very cautious and careful in what they had either done or said, knowing very well that if they made one false step, or committed one indiscretion, they would have done much towards blighting the prospects of success. The Local Taxation Committee did not take upon itself entirely the credit of this great victory. They were creatures of the Chamber of Agriculture. It gave them its entire confidence when it entrusted to them extraordinary and unlimited powers which entailed vast responsibilities, much labour, and incessant anxiety. He would remind his hearers, however, that the question of local taxation was not so novel as many supposed. He could remember when Mr. Disraeli twenty years ago introduced the subject; but he did not succeed, because he had not the chambers of agriculture behind him. Nothing could be done without an organization out of doors, and this Mr. Disraeli found out, although it ought perhaps to be admitted that the grievances of which the right hon. gentleman then complained had since been much aggravated. He regretted that more landlords would not give encouragement to the chambers of agriculture, which he believed were the greatest guarantee against wrong and robbery the agricultural interest

possessed (cheers). The present Government was plainly trying to divide the interests of landlord and tenant, knowing very well that as long as the two were united they were not to be overcome; and he would warn his friends that if the present or any other Government succeeded in dividing the two interests—the landlord and the tenant—their organisation would be of very little avail. If the landlords took up this question as they ought to do, the association would get £500 where now it secured but £100, and he had no doubt that if it had been a question that especially concerned commercial interests £100,000 would have been raised long ago. The resolution passed in the House of Commons the other day conveyed a vast deal more than a casual reader would suppose. It opened by condemning the present system of levying the local rates; it drew a distinction between rates levied for national and rates levied for local purposes; it said also that no legislation on the subject would be satisfactory, unless it attempted to remedy the grievances of which they as an association complained. There remained two things for them to do; they must take care that the Government carried out in its integrity the resolution passed in the House, and they must not allow any new local charges for national objects. In conclusion, he hoped the efforts that had produced so much in the past would be relaxed in the future.

Mr. G. F. MUNTZ proposed "The Chairman," who, in acknowledging the compliment, expressed a hope that Sir T. D. Acland would not allow himself again to be made a catspaw in the House of Commons. He thought that the agitation among the labourers was utterly factitious, and that the labourers had been brought to the present state of things by agitators who had no interest whatever in agriculture. A strike at the beginning of harvest would be a fearful national calamity.

Mr. J. BOWEN JONES proposed "Prosperity to the Agricultural Classes."

Mr. C. S. READ, M.P., responded. It had been said, he remarked, that the landed interests were too much represented in the Chambers of Agriculture; but a proof to the contrary was the fact that not a single landowner was called upon to respond to the toast, although he thought that a landlord as well as a tenant should have been called upon. He had heard a great deal all his life of the union of landlord and tenant. Twenty-five years ago he believed it was a sham; but now it was becoming a reality. And in these days the union of landlord and tenant was more than ever needed. Agriculture was a broad stream, and it had been said that it was too broad to be spanned by one arch. The tenant-farmers, however, were the pier in the centre of the structure midway between the landlord and the labourer. The unfortunate part of the story just now was that they were rather pulled on both sides. They had a certain advance in rent, which of course they must accept, and they also had a certain advance in labour, which they were happy to pay. But they did not mean to be dictated to by any outsiders as to the way in which they should arrange the wages of their labourers. He very much wished to have not only a reform of local taxation, but a very much better style of local self-government. There was a talk a few days ago about financial boards; but the agitation died out, because on inquiry it was found that the magistrates who spent the money of the ratepayers had no control, as almost the whole amount was paid under statute. He was sorry the idea had dropped altogether, because he wanted some great county authority, composed of the leading men of the county, to be a sort of stop-gap between the central authority in London and the minor authorities in the county. The Government were every year taking fresh powers, and making their organization more complete, and he hoped before many years to see a good county board, which should on the one hand take care that the different local authorities did their duty in their several districts, and on the other, oppose with a strong and mighty arm that powerful centralization and tyranny which was now exercised.

Mr. JABEZ TURNER and Mr. C. A. DEAN also returned thanks.

"The Chambers of Commerce" was proposed by Mr. JASPER MORE, and briefly acknowledged by Mr. TIPPING, M.P.; and the toast of "The Press" concluded the proceedings.

A meeting of the Council was held on Wednesday forenoon, Mr. Heneage presiding. The monthly report of the com-

mittee on Local Taxation given above having been received and adopted.

The CHAIRMAN moved, and Mr. NEILD seconded, that the resolution on Local Taxation passed at the general meeting on the previous day be received, adopted, and circulated.

Mr. RASSON (Shropshire) declared that it was a lasting disgrace to the landlords that they had not more heartily supported the local taxation reform movement. If such a question had been raised affecting the interests of the manufacturing and commercial classes, they would have seen men subscribing their hundreds and thousands of pounds to carry out their object; and he had no doubt the time would come when the landlords would view with regret the course they had taken on this question.

Some observations were also made by Mr. WHITAKER and Mr. MUNTZ, and the motion was agreed to.

On the motion that the resolutions on Sanitary Reform agreed to at the general meeting of the Chamber be adopted and circulated,

Mr. GENGE ANDREWS took exception to the passage in the second of the resolutions, which set forth that an "adequate proportion" of the expenses involved in the Public Health Bill ought to be charged upon the imperial taxes. This, he agreed, was tantamount to admitting that they were willing to pay out of local rates a part of the cost of sanitary reform, and he held that it would be unwise to consent to any new charges unless they were compelled by a vote of the House of Commons. In short, it was nothing less than surrendering the great principle for which they had all along been contending.

Mr. ARKELL concurred in the opinion.

Mr. CORRANCE observed that if the Council altered the resolution in the sense of Mr. Andrew's view, it would be to all intents and purposes a reversion of the resolution.

Sir M. LOPES could not agree with Mr. Andrews, and recommended that they should not ask for more than they were entitled to.

The CHAIRMAN held that as the resolutions had come from a general meeting of the Chamber, the only alternative the Council had was to accept or refuse them.

The resolutions were then confirmed.

On the motion of the Chairman, seconded by Mr. Caldecott, the following resolution relating to the financial proposals of the Government as affecting agricultural interests was passed unanimously: "That this meeting expresses its dissatisfaction that no portion of the surplus was applied by the Chancellor of the Exchequer to reducing the burdens which press upon agriculture."

Mr. PELL, M.P., explained the provisions of the Bill now before the House of Commons for regulating the employment of children in agriculture in England and Wales, and which is backed with the names of Mr. Read, Colonel Ackroyd, Mr. Kay Shuttleworth, Mr. Kenaway, and Mr. Pell. The principal clauses of the measure enact that from the commencement of the Act (in January, 1874), it should not be lawful for any employer or his agent to employ any child under the age of 8 years in the execution of any kind of agricultural work; also that it should not be lawful to employ a child above that age, unless the parents had obtained a certificate or certificates to the effect that the child if under 10 years of age had completed 250 school attendances, and if above 10 years and under 12 150 school attendances, during the 12 months ending the 31st of December preceding. The minimum holding to which the bill applied was one acre; and one of the provisions created a court of summary jurisdiction empowered, upon the written application of any person or persons occupying in the aggregate not less than 500 acres of land in the district, to issue a notice declaring the restrictions imposed on the employment of children to be suspended within that district for a period not exceeding six weeks. The limit of the age up to which the restrictions would apply was 12 years instead of 13, as in the factory acts. It would thus be seen that the scheme was an alternative to the compulsory system, and that a reasonable one. If such an alternative were not adopted with reference to the education of agricultural children the result must inevitably be to strengthen the hands of those gentlemen who thought that the advance of popular education depended solely upon direct compulsion. It was stated by Mr. Baker, the inspector of factories, that 94,000 children came within the operation of

the Factory and Workshop Regulations Acts, and he believed that something like 90,000 were engaged in agriculture by occupiers of more than one acre of land, and who would consequently come under the provisions of this bill. When the promoters of the bill framed the clause relating to suspension they had in their minds such work as hop picking, fruit picking, and other occupations, in which large numbers of children were engaged, to the great advantage of the community, and without whose aid the work could not be done. As to the penalties, all he need say was that they were by no means so severe as those under the Ballot Bill.

The Rev. F. JACKSON would be glad if the bill could come into operation even sooner than 1874. Referring to agricultural gangs, he said that in his parish these gangs were regularly employed, and the Act of 1867 had been productive of the greatest possible benefit; but it was to some extent evaded, for it did not state whether the distance of three miles within which children might go to work was to be taken "as the crow flies," or measured by the roads and lanes. The bill was a wise and necessary advance, and he had great pleasure in giving it his support.

Mr. VARDEN (Worcestershire) feared that the bill would in some respects prove a serious restriction on the growers of fruit, which ripened at uncertain periods. In that case, the loss of the labour of children under eight years would be a great evil, not only to the proprietors, but to the families employed; for he felt convinced that fruit-picking would be considered a branch of agriculture, and that the employment of children in the work would come under the regulations of the bill. Of course, everything hung upon the sufficiency of the suspending time. He also thought that the area of 500 acres was too large.

Mr. READ, M.P., believed that the suspension clause would meet every case of the sort; but there was no objection to extend the time from six to eight weeks, which might be divided into such periods as would amply suffice to secure all the crops in the kingdom. It should be observed that the application for a suspending order might be made by a number of occupiers holding among them in the aggregate 500 acres within the Petty Sessions division. Occupiers could easily join and ask the magistrates to give them six weeks or two months to enable them to get in their harvest. The Act could not be brought into operation before 1874, because the children to whom it applied would not have been to school this year, whereas in 1874 they would have been in the preceding year. As to the general principle of the Bill, he had always been opposed to direct compulsion, which he believed would not work well even in towns, and he was sure would not do so in villages. What he wanted was not direct compulsion, but irresistible persuasion; and that was the principle on which this measure was based.

Col. BRICE, M.P., regarded the Bill as a great step in a right direction, but thought the general provisions would turn out to be inoperative.

Approval of the Bill was also expressed on behalf of their respective Chambers, by Mr. Branley (Lincolnshire), Mr. Fowler (Dorset), Mr. Trask (Hants), Mr. Wintle (West Gloucestershire), Mr. Whitaker (Worcestershire), Mr. Storer (Nottinghamshire), Mr. T. Willson (Leicestershire), and Mr. Muntz (Warwickshire).

Sir M. LOPES heartily approved of the measure. Its chief value was in applying gentle pressure rather than compulsion. There was no class of the community who more objected to compulsion than the agricultural class. By argument and conciliation they might be led anywhere, but once attempt to drive them and they would kick out all fours. He was satisfied that the Bill would meet the requirements of the agricultural classes.

Mr. WEBB (Cambridgeshire) would raise the limit of 8 years to 10, 8 being in his opinion too young. The application for suspension to the magistrates was unnecessary, and he thought it would be quite enough if the Bill itself provided for the removal of the restrictions during the time that the schools were closed for the holidays.

Mr. A. SMITH, M.P., was at a loss to know how the Act was to be enforced. Who was to be the informer?

Capt. CRAIGIE suggested that the limit of the holdings required for applications to the magistrates should be less than 500 acres,

The CHAIRMAN intimated that the limit would be reduced to 300.

Mr. PELL briefly replied. Alluding to the remark of Mr. Abel Smith, he said that the Bill would be operative or inoperative just as local public opinion went with it or against it. Inspection must be inefficient in the rural districts, for even in the manufacturing towns it did not secure all that had been hoped for it. But if the Bill were evaded or proved a dead letter, it would be the result of a want of spirit on the part of the squire and the parson, which he could not bring himself to think they would display.

Ultimately the Council agreed unanimously to approve the Agricultural Childrens' Bill.

Mr. C. S. READ, M.P., said he had been requested by the Business Committee to move the following resolution: "The Central Chamber of Agriculture, while fully recognising the right of the labourers to combine for the advancement of their interests, is of opinion that the interference of a London committee, composed largely of the leading members of Trades Unions, would be of no advantage to the agricultural labourer, and will produce much mischief between the employer and employed." The hon. member proceeded to say that not only did he not object to the combination of the labourers, but he would go further and admit that they had a perfect right to combine. They pointed to the Chamber as a combination of landowners and farmers, and said—"Surely we may have our unions and combinations as well." Now, he would very much like, if it were possible, to have the whole lot of agricultural labourers present in the room to discuss their grievances with them, rather than that they should fly off at a tangent, as they had done, to join themselves to men who, professing to give them good advice and sound instruction, really did nothing more than harangue them in such a way as must end in arraying class against class. He appealed to any man, either in or out of the room, to say whether he had ever seen or heard in that Chamber, or at any Farmers' Club, of any attempt having been made to combine for the purpose of reducing the wages of labour. So far from that, he hesitated not to say that every discussion which had taken place or resolution passed there had always been aimed at the improvement of the labourer's condition. The other day, having received an invitation to attend a meeting at Willis's Rooms, he went to listen and to learn; and he must say that he heard a great deal of preaching there, which to him, whether it was by a canon of the Established Church, a rev. parson, or a local preacher, was somewhat objectionable when it was outside a place of worship. The other chief element that made itself apparent was water; water mixed up with a dose of Communism from the Trades Unions, and as he was in favour of the use of beer against water, he could not say that he sympathised with that part of the movement at all. He owned that he was one of those who, at the last meeting of the Council, thought the subject had better not be discussed in the Chamber, and his reason for so thinking was that he feared lest the outside public would attach too much importance to the movement that had taken place among the agricultural labourers. He was quite sure that by the London press particularly it had been made too much of, and had been entirely misrepresented by one or two of them. Here came the question whether the Chamber could allow such statements to pass without refutation and without contradiction; and he now proposed to put the case of the farmer more distinctly before the public than it had yet been. In the first place, then, he held that the rate of wages paid in any particular districts afforded no criterion of the value of work performed. He did not, however, wish gentlemen to take his word on that head, but to peruse the report of the commissioners on the employment of women and children in agriculture, and especially the able report of Mr. Culley. He stated that the agricultural labourer in Northumberland is supposed to earn 18s. a-week; and contrasting that with the 12s. a-week paid in Berkshire, he concluded that the man who pays the most money really gets the most labour for what he pays, and that the amount he expends per acre is more in Berkshire than in Northumberland. The argument was that the farmers must pay better wages to get better work; but he should say that if they had better work they would certainly have to pay more for it. Let them observe how this principle had been applied, and what had been the

results in the case of other industries. He happened to be a member of the Habitual Drunkards' Committee of the House of Commons, and had heard some interesting information given by witnesses from all parts of the country, and even from America, as to the great increase of drunkenness within the last few years. One question which he put to nearly all these witnesses was, "To what do you attribute this increase of drunkenness of late?" and the answer was, "To increased wages and the greater amount of leisure which the poor man has at his command." The practical result was that in the manufacturing districts, although wages had advanced fully 40 per cent. in the course of a few years, the men actually earned less in the week than they did before. It was a remarkable fact, but a greater number of people who were supposed to be earning 30s. a week really earned no more than when the wages were £1 a week. And this was the reason; they hardly ever went to work on the Monday; they were slack on the Tuesday; they did pretty well on the Wednesday; but it was not until Thursday that, in some factories and workshops, the whole of the men were at work. Now, he contended that the only true test of cheapness was piecework, and he was glad to find that the agricultural delegates at Willis's room, Mr. Arch, for instance, agreed that there must be a classification of work, which meant piece work, for it could mean nothing else. There was much work upon a farm, such as weeding and picking stones, that could be performed by any woman; but the question was how to classify the men so as to pay one 10s. and another 12s. a week when all were doing the same kind of work. The resolution he had moved stated that, although the labourers had a right to combine, the interference of trades unionists would produce much mischief between employer and employed; but he believed that, if the matter were left to those delegates from the agricultural labourers who assembled at Willis's, no great danger was to be apprehended. When, however, they came up to London and united with trades unionists, see the result. Here was a short extract from a letter which had been sent down to Berkshire by a member of their committee, Professor Beesley. "The question," said the professor, "is not what you need or what your employers ought to give you, but what you are strong enough to make them give you." Surely advice like that was more calculated to produce "mischief between employer and employed." There could be no doubt, he thought, that the uniform rate of wages generally adopted in agriculture had, in a measure, been forced upon the farmers by the existence of a certain amount of surplus labour, that when agricultural labour got scarcer and dearer it might be more easily classified; and that more would have to be paid for increased care and attention, as well as for skilled labour, which would be more than ever required in the direction and management of agricultural machinery. Again, the farmer could not afford to pay much more per acre for his labour than he did now, for he had to compete with the whole world, and could not add materially to his produce per acre. What, then, would be the result of any great advance in the price of labour? There would be less arable land and more grass land, and there could not be a greater loss to the country than a diminution in the arable acreage. The farmer might get more profit on the grass land, but he would certainly produce a less amount of food for the people. In Norfolk the consequence would be, even on the light lands, that the grass would be kept two or three years, instead of cultivating on the four-course shift. A great portion of these lands, which had been sheep-walks early in the present century, must become sheep-walks again, and this would obviously be a serious loss to the nation. So, too, with a considerable portion of the heavy lands of Suffolk, which for years preceding the present century were almost all in grass, and used for dairy purposes only. Another point for consideration was that the average weekly wages of the labourer, whether they were put down at 12s. to 14s., were always supplemented by extra work in the summer months, and at the time of harvest by at least 2s. or 2s. 6d. a-week. Of that he was positive; and when they came to the question as to employing people all the year round, he held that it would be better for the farmer, or at any rate cheaper, to pay 3s. a-day for a man when he wanted him, and only when he wanted him, than give him a regular wage of 2s. a-day throughout the short days of winter. Then, when they came to the employment of old men, what would be the result? At present many men were employed

who were over 70 years of age, yet still received the full rate of wages; and it would be a very bad thing for them and for the community, if they were turned off or had their wages considerably reduced when they were not wanted. The other day Mr. Hibbert, the secretary to the Local Government Board, stated that he had received applications from several agricultural unions where the wages were not above 10s. a week for permission to grant out-door relief in certain cases; and he particularly referred to one case at Ross in Herefordshire in which, as he told his sympathising constituents, a man, with eight children under ten years of age was paid but 10s. a week. The employer of that man had, however, written to him (Mr. Read) in these terms: "I have no man on my farm who is in receipt of less than the following wages:

	s.	d.
Weekly pay, in wet or dry weather.....	10	0
Cottage and garden, rent and rates free.....	2	0
Extra pay for harvest	£1	0 0
Potato ground worked	0	6 0
	£1	6 0
Two quarts of cider daily at 6d. per gallon....	0	6
	1	6
Total.....	14	0

Those men capable to do the work take the mowing and harvest work at a rate per acre, as agreed, and so get higher wages. The waggons and shepherds get extra pay and allowances; and I have offered the men money instead of cider, which they refused." The next question was, whether all agricultural labourers were really willing and able to come to the farmer as simple contract labourers, and give up the patriarchal or feudal system, so to speak, at present in operation. He did not think they were. They would not abandon their prerequisites. As he had shown in the instance just cited the men preferred their cider to money; but he should be glad to see that system abolished, for he thought it a very bad one. Would the labourers be willing to pay 2s. or 2s. 6d. a week for their cottages instead of 1s.? In districts where they were supplied with milk, would they like to pay the full price for it? Would they be inclined to pay the whole school fee for the education of their children? And to do away with all those friendly charities, which were of such real service to them, but upon which no money value could be placed, though it amounted to a good deal in the course of the year? He could not doubt that much of the agitation had originated in districts where the cottage accommodation was fearful. Where a lot of men were banished from the farm, and congregated in what were termed "open villages," the condition of the agricultural labourer was very bad indeed. On this head he would say a word or two with regard to the comments made on some landlords who had given their cottage-tenants notice to quit. His opinion was that if the landlord built cottages for the exclusive use of the labourers on his estate, and the latter thought proper to leave their employment, it was the duty of the landlord to get rid of such men and put in other tenants who would be of use to the farmers. On the other hand he protested against the custom of giving the tenants weekly notices to quit. That was extremely bad, alike arbitrary, unfair and un-English. Moreover, if a man were turned out of his cottage in the summer months, it was the bounden duty of the landlord to pay him compensation for the work he had done in his garden, and for all the trees, bushes, and crops that might be in the ground. As to the farmer, he was in a very different position from that of the manufacturer. He could not work half time. He could not shut up his mill, put the key in his pocket, and send the labourers adrift, as was so often the case in the manufacturing districts. With regard to the wonderful demand for labour which had sprung up during the last few years in those districts, he felt sure that it would have a great, fearful, and speedy collapse. In this county we had never gone beyond ten years without a commercial panic, and it was pretty certain that the artificial stimulus which had sent up the labour market would produce not only a national, but an international panic before many years were over. We should then experience such a collapse as had, perhaps, never been witnessed in this country, and the labourers who had migrated to the towns would be seen returning to the agricultural districts as had invariably

been the case in previous panics. He agreed that the migration of the surplus population, where it did exist, ought to be encouraged; but it did not require external encouragement; neither was a Canon Girdlestone wanted in every parish. The agricultural labourers themselves did not stand in need of such outside assistance. They had their penny papers read to them in a public-house, and they knew as well as any one else what was the price paid for labour both in country and in town. The agents of the employers of labour were penetrating into every district; and besides them, there were competing for the labour of the agricultural workman emigration agents from every country in the new world, and from all our colonies. On the other hand, any young fellow who had sufficient self command to save the cost of his beer and tobacco for one month, could lay by enough to carry him, by Parliamentary train to the busiest hives of industry in the kingdom. It was said that our labourers as a class were wretched, miserable, and poor, and did not save anything, and he owned he could wish that there was more providence and forethought among them, especially the younger men; but it was a noteworthy fact, with regard to Warwickshire, where the agitation commenced, that the savings bank at Warwick had paid over to the Post Office Savings Bank no less a sum than £127,000, of which 75 per cent. consisted of the deposits of farm-servants and agricultural labourers. It was well known, also, that agricultural labourers throughout the country deposited considerable sums in the savings banks; and he might add that of his three nearest neighbours, occupying between them six or seven hundred acres, two had been agricultural labourers, and one a farm bailiff within his recollection. There was no doubt that the Poor-law had, in a great measure, to answer for the actual condition of the agricultural labourer; for it had destroyed self-help and self-reliance, and in many districts had been used in aid of insufficient wages. At his own board of guardians the other day, an old man presented himself and said that he wanted his pension. That, perhaps, was an uncommon occurrence—"No, no," from Mr. CALDECOTT, Warwickshire—at all events it was not an uncommon feeling among the agricultural labourers. They regarded the Poor-law as they would a friendly society, and considered that they were entitled to relief after they were 60 years of age. And when it was considered that, under the Poor-law, the improvident and dissipated received, in case of sickness or advanced age, just as much as the most provident, careful, and saving man would get from his friendly society, he contended that, by the iniquitous system of out-door relief, the Poor-law dealt a vital blow at the providence, forethought, self-help, and independence of the labourer. With one remark more he would conclude. It was this: he objected very much to farming being regarded as a sort of charitable institution for the employment of, and payment of full wages to, all the idle, all the half-witted, all the aged, and all the unskilled labour that the manufacturers in towns would not employ.

The resolution was seconded by Mr. STARTIN (Warwickshire), who concurred in all that had fallen from Mr. Read.

Mr. NEILD thought that the best way of countering and defeating the wild and visionary schemes of the men who were promoting the agitation would be to let the movement run its course and wear itself out. He was opposed, therefore, to any demonstration against the labourers at the present moment, and believed that before the harvest was over the aspect of things would be completely changed. His impression was that a serious collapse was not far distant in the great manufacturing districts; and that he said as a Lancashire man observant of what was passing around him. Foreign markets had become generally overstocked with our manufactures. The price of cotton in the United States was at this moment higher than it was at Manchester, and our home market for cheese, which constituted so important a staple in Cheshire, was so glutted that whole cargoes sent from America to Liverpool had been shipped to America again. Such facts as these pointed a moral which no one could misunderstand.

Mr. STORER suggested that, whether the strike was of longer or shorter duration, or was likely to extend or not, what farmers ought to meet their labourers in a friendly spirit, and if possible adopt the Lincolnshire system of hiring for a year.

Mr. MUNZ pointed out as one difficulty that it was impossible to ascertain the actual rate of wages, owing to their varying in different parts of the country, and contended that there ought to be some measure of value in all business transactions between employer and labourer, as had been the case for years in the manufacturing districts. If it was necessary in one occupation it was equally so in another; and he believed that if all transactions were carried on in current coin of the realm, it would be the means of allaying a considerable amount of discontent and dissatisfaction.

Mr. FOWLER observed that in his county (Dorsetshire), where the system of paying wages in money and in kind prevails, there was a decided indignation on the part of the labourers to abandon what they termed "perquisites." In that county they were as well paid as in any part of England. As to the strike in the midlands, he did not believe there was any vitality in it.

Mr. JABEZ TURNER drew attention to the manner in which the labourers' meetings were got up. He stated that the rector of a parish in Cambridgeshire, well known as a friend to the labourers, was lately waited upon by two members of his congregation, who informed him that they had just received a letter from London which they desired to lay before him. The letter was to the effect that, if they thought it desirable to get up a meeting at Whitelessa, the writer was prepared to come down, on their paying his third-class railway fare there and back, £1 for each meeting, and providing him with lodgings while there. It was also stated that if they could get up four meetings, he would do the lot for 50s. (laughter). Such were the men who were going about the country exciting the labourer against the farmer, and he held them up to the execration of the Chamber and of all peaceably-disposed persons. Let the farmers endeavour to come to an amicable arrangement with their labourers, and he felt sure the result would be satisfactory without the influence of the Odgerses and Herberts.

The CHAIRMAN concurred in the opinion that the rate of wages paid was no fair criterion of what the people actually got. In the same way as Mr. Turner had described, an attempt was made to get up a meeting in his neighbourhood, but it turned out that the agitators could not find a blacksmith to lend them a shop, or a man to go to the meeting, and there had not been the slightest bother with any of the labourers there. If they did strike, however, and were dealt with upon what was termed the mercantile principle, what would follow? Would the landlord let his cottages, costing £250 a pair to build, with an acre of land attached to them, at the rent he did now? Would there not be many little benefits, trifling in themselves, which the labourers enjoyed, but of which they would then be deprived? Where they were living, as in his district, twelve or fourteen miles from the railway station, how were they to get their coals if they were not brought to them by the farmer? What would they do when their houses were visited by sickness if they had not a master to send for the doctor? And how in the depth of winter, or in times of sickness, would they live in many a family without the soup that they got from the landlord or the farmer—their best friends? It had been well said that the farmer could not recoup himself any advance in the price of labour as the manufacturer could do; and he might mention, by way of illustration, that last autumn, when a strike took place in a machine manufactory, and the artisans obtained their demand of nine hours a day and a rise in wages, the very following week one of his (Mr. Henneage's) tenants handed him a circular from the firm, announcing that they would be obliged to charge 7s. 6d. more for their ploughs in future. Thus the farmer had to pay for the strike in that particular manufactory. He fully concurred with Mr. Read that labourers could rise in the social scale; for at this moment of two of his principal tenants one had started as a farm-bailiff and the other as a labourer; one was now farming on his own account between 300 and 400 acres of land, the other over 200 acres, and had also put his son into a farm of about the same extent. These cases showed that labourers could rise, provided they were honest, industrious, and thrifty, and avoided public-houses and other sources of temptation.

The resolution was agreed to, and the Council separated, after sitting nearly four hours.

THE GAME-LAWS COMMITTEE.

At the sitting on Tuesday, May 7, Mr. W. Hunt in the chair, there were also present Sir M. H. Beach, Mr. Cameron, Mr. Cowper, Mr. Dent, Lord Elcho, Sir George Grey, Mr. Hardcastle, Mr. McCombie, Mr. McLagan, Lord Mahon, Mr. Muntz, Mr. Pell, Mr. C. S. Read, Sir H. Selwin-Isbetson, Mr. Sherlock, Mr. Sturt, Sir John Trelawny, Mr. Whitbread, Mr. Rowland Wynn, and Mr. Winterbotham.

The Hon. ADOLPHUS LIDDELL, permanent Under-Secretary of State for the Home Department, in replying to questions, explained first the existing laws relating to deer. These were not included in any Game-law, nor were they regarded as *feræ naturæ*, or as private property. If a deer escaped from the land of its owner to that of another person, the latter might shoot without being amenable to the law, as, under similar circumstances, he would be if he were to kill a sheep. In Somersetshire, where the red deer still bred, they were occasionally killed when they strayed on the road, much to the disgust of the sportsman. A licence was required for shooting deer, and penalties were imposed for the illegal taking of deer, extending to imprisonment with or without hard labour for a second offence. If a man were found in possession of the skin or head of a deer, and could not satisfy inquiries as to how he came by it, he was liable to penalties; the law being in this respect more severe than with regard to game. In the case of man in possession of the skin of a sheep, the onus of proof of the illegality lay with the prosecutor; but in the possession of the skin or head of a deer the burden of proof lay with the defender. Nothing in the statute made any distinction between dressed and raw skins. These were consolidated and modified from older statutes of much greater severity, but he could not say how far back the present version extended beyond the 7 and 8 Geo. 4. Coming next to the Game-laws, including hares, pheasants, partridges, grouse, heath or moor game, black game, and bustards. Persons going armed by night for the destruction of game might, after a previous conviction, be sentenced to penal servitude. If a man took or destroyed rabbits by night, he was liable under this Act. Persons having the power of arrest were the owner or occupier, or any person having the right, or reputed right, to free chase on the land; also the game-keepers, or servants of those persons. With regard to taking game on the highway, the statute had been interpreted to mean that the person taking game on the highway was using the road for a purpose other than that for which it was intended, namely, walking on; and that the right to the game on the highways belonged only to the possessors of the soil.

The chief constables of the counties of Hereford and Norfolk next gave evidence. Mr. WINTERBOTHAM said that, taking the whole country, there was during the past year an increase of almost every group of crime except day poaching. In offences under the Game-laws there was a diminution of 15.2 per cent.; in all other classes of crime there was an increase. The number of offences against the Game-laws had fallen from 12,070 to 10,071. The Poaching Prevention Act had not taken the constables away from other duties. There had been a little jealousy among farmers and the people of the county generally in this respect at first, but that was dying out. Night poaching in Norfolk had averaged 12½; the average in each of the three previous years was 25. The diminution of poaching had no great effect on the diminution of other crimes. In one of the counties the amount paid in fines under the Game-laws had paid the cost of prisoners under the same, and had left a balance of £12 in favour of the county. The game was generally taken for sale by confederates, and often by women, and was most frequently sent up to the London market. Twenty-five brace of partridges were once stopped *en route*, and were kept so long, to find out the sender, that they became useless. Preservation of game in Hereford had decreased, and there were now very few hares left. The land was let out too much to shooters from London, who did not consult the interests of the farmers. If hares and rabbits were taken out of the category of game, it would decrease offences against the Game-laws; but if the protection of the

criminal laws were withdrawn, hares and rabbits would soon be exterminated. No one would regret their destruction more than the farmers, who were the best preservers wherever they were allowed to course, and to have the right to the game. Neither of the witnesses thought it practicable to make game property.

At the sitting on Friday Mr. LIDDELL gave further evidence. With respect to the unlawful buying of game, it was clear that the game which was sold in London market early on the first day of the season must have been killed out of season; and it was worthy of consideration, that the right to sell game should be postponed until the day after the opening of the season. As to the question of assessment, in the case of *Reg v. Williams* it was decided that where a tenant has both the land and the game he is liable to be rated for the game with the land. In *Reg v. Thurston* it was ruled that where a tenant had not the right to the game he was not liable to be rated for what he had not; where the owner of the land was himself the occupier, but let the game, he was assessable for the value of the land and game. No case had ever been decided that game was assessable irrespective of the land. In a case where an owner did not occupy the land, and did let the game to another person not the occupier, the landlord would not be liable to be rated for the game; but, in his opinion, the renter of the game would be liable to be rated for the cottage which he occupied with the shooting, the value of which would be taken in connection with the value of the game. As an illustration of this, the toll-house of Hammersmith Bridge was rated, not at its nominal value, but in connection with the tolls which came out of it.

The chief constables of Staffordshire, Somersetshire, and Derbyshire gave information, chiefly statistical, as to the state of crime connected with the Game-laws in those counties. Somersetshire was not a county where game-preserving was carried on to a great extent, and there was not much poaching, considering the area of the district. In 1871, in the county of Somerset there were 376 persons proceeded against for day poaching, of whom 45 were discharged, 331 convicted, 311 fined, and 20 sent to prison. There were seven persons convicted of night poaching, and sent to prison. Under the Poaching Prevention Act 44 persons were proceeded against, 6 of whom were discharged, 38 convicted, 34 fined, and 4 sent to prison. From 1862 there had been a steady increase in poaching in the county of Somerset, though he believed the gangs of night poachers had been broken up, chiefly through the police having taken their nets, which were valuable, and could not easily be replaced. Persons who poached at night were usually persons who stole when they could. One of these night poachers was seven years in prison during the sixteen years the witness had been chief-constable. The man had been in penal servitude for theft after previous convictions. Those who practised day poaching did not belong to the criminal classes. There had been persons convicted of night poaching who had not been previously in gaol. Constables in Somersetshire were never allowed to go specially to watch for poachers. If a constable heard shooting in a wood, he might apprise the keeper; but he was not called upon to do so, and would not be accused of neglect if he did not. There was a great demand for game in Bristol and Bath, and for rabbits among the working classes. If hares and rabbits were taken out of the category of game, a great deal of poaching would be prevented. The employment of game-keepers did not tend to diminish general crime, nor did game-keepers make a practice of giving information to the police of suspicious characters whom they might see on the land. There was no killing of the red deer of Exmoor Forest by poachers. The people of the county took great pride in the red deer, and would not think of killing them. If hares and rabbits were put out of the Game-laws, there would be great difficulty in ascertaining whether a man went on land for the purpose of killing feathered game. The destruction of red deer would be very unpopular in Somerset.

The chief-constable of Derby stated that that was a strictly

preserved county. Poaching would be much diminished, and there had been, owing to the Poaching Prevention Act, a great check on petty robberies, such as robberies of hen-roosts. The night poacher was a confirmed poacher, and nothing but a very heavy penalty would make him think he was wrong; the day poachers were farm-servants. One poacher, a glass-blower, who earned £3 a-week, was so fond of poaching, that he would not give it up. That man had been stopped on two or three occasions, but nothing was found upon him; he was clever. The police gave information to game-keepers in every possible way, and if game-keepers took more notice, they might do a great deal of good. But the gamekeepers were not by any means an active class of men. The poaching was chiefly the taking of ground game by snaring. It would, in his opinion, be a good thing if ground game were made the property of the tenant. He would certainly not like to see the protection taken away from hares and rabbits, so that anyone could kill them. Old poachers had taken very much to fish poaching lately because the Poaching Prevention Act did not apply to that. He could not say how it was that there were more night-poaching cases (25) in Derbyshire than in any other county in England last year, except Yorkshire, unless it were that Derby had a larger population for the area. Where game was well watched there was not so much poaching. Game dealers should, in his opinion, keep a record of the names of people of whom they bought game, and of the day and hour of the purchase. He was aware, however, that this system of registration had failed with marine store dealers and pawnbrokers. A great quantity of game was sold by the landlords in Derbyshire after shooting parties. If hares and rabbits were taken out of the game list it would be necessary to alter the law of trespass. Of the 513 convictions for night poaching in the United Kingdom last year, and the 9,281 cases of day poaching, he could not say what percentage was due to poaching ground game. He did not see that making game property would render an increase of the police force necessary; nor did he think that such a law would raise great difficulties in the way of private persons who might be innocently trespassing. He would make it an offence for game to be found on the person of a poacher, in the same way as the finding of skeleton keys on a suspected burglar.

The chief constable of Staffordshire said that game was largely preserved in that county, and he had noticed that while pheasants had increased, the number of rabbits had decreased. This was due to the action of tenant-farmers, and the good feeling of the landlords. The day poachers were chiefly farm-labourers and lads who went out for mischief, and he did not think they became night poachers. The night poachers, if they could not get ground game, would take feather, and failing that, would rob hen-roosts, or practise sheep-stealing, where sheep-stealing occurred. He did not think that colliers poached much, or any men who were in regular work. The chief constable of Lincolnshire said that the Poaching Prevention Act had entirely got rid of night poaching, but had not decreased other offences. He agreed with Capt. Congreve (Staffordshire) that the poacher would take pigeons and fowls, but there were poachers who would take nothing but game. The result of taking rabbits and hares out of the Game-laws would be to exterminate hares in three years. He did not believe that taking them out of the game lists would improve the morality of the people, but would increase the number of persons who would idle away their time in pursuit of them. Capt. Congreve thought it would be almost impossible to protect the feathered game if the ground game were made free, because people who went after ground game, which they would have a right to, could not be prevented from taking the feathered game which came in their way. The chief constable of Lincolnshire thought that if ground game (which was the most profitable, and paid for the expenses of preserving) were destroyed, it would not be worth while preserving the feathered game. There would not be enough game to provide sport worth having. Capt. Congreve believed that the reports published in the newspapers on the subject of the ravages of ground game, had had a beneficial effect to the farmers, by inducing landlords to decrease the head of game. The chief constable of Lincolnshire did not believe that the abolition of protection to ground game would be acceptable to farmers. They disliked over-preservation, but they would not like to see game destroyed.

SALE OF MR. BOWLY'S SHORTHORNS,

AT SIDDINGTON, CIRENCESTER, ON THURSDAY,
APRIL 25, 1872.

BY MR. H. STRAFFORD.

On the last Thursday in April, three years since, Mr. Bowly, whose herd with Col. Kingscote's, stands as the oldest in Gloucestershire, brought his Musical tribe with a few Siddingtons and a good lot of young bulls before the public with the most satisfactory result. The 25 cows then fetched 90 guineas apiece, and the bulls £35; these figures being augmented by three heifers of the Siddington or Kirklevington tribe, a pure Bates family, all of which were bought by Lord Dunmore at an average of £360 10s. It was then thought by some that the Musical tribe, with their rotundity of rib and richness of quality, was the best family at Siddington. Mr. Bowly, however, held on to his Gazelles, which he got from the Rev. Henry Berry in 1838, or rather from Mr. Stokes, who had been a purchaser at Mr. Berry's auction. The sort came from Mr. Whitaker, and inherited those great milking properties for which the Burley stock was so famous, and which have been perpetuated at Siddington. Old Gazelle, bought when fourteen years old, lived and bred until her twenty-first year was reached, and most of her stock have inherited her grand constitution. Nearly twenty years ago Mr. Bowly parted with a lot to go into Buckinghamshire, with among them a few Gazelles, but since then they have been kept together, and crossed with those first-class Duchess sires in which Mr. Bowly has so spiritedly invested. We believe that only three have been sold, and all to go abroad; two of them being purchased by Mr. Thornton, one for Australia and the other for America. After Fourth Duke of Oxford left, the bull Union (19031), bred from the Musical tribe by Mr. Stratton's Irish bull Young Windsor, a son of Mr. Booth's Windsor, was put on Fourth Duke's heifers, and their produce were in their turn put to Seventh Duke of York and Second Duke of Tregunter, the issue bring a splendid lot of heifers, having excellent tops, rich colours, and great substance. Mr. Edgar Hanbury purchased two of the best so bred at comparatively reasonable figures, and Mr. J. P. Foster got one of the finest cows in the sale, lot 6, Gazelle 10th, very cheap at 62gs. Nevertheless, good and excellent as they were, those without the Union cross shot up in value. Mr. Samuda, M.P., gave 105gs. for Gazelle 14th, and 210gs. for Gazelle 25th, each time against the bid of Lord Fitzhardinge, who got the thickest heifer in the sale, a white yearling, of great elegance and style, "by Seventh Duke of York, dam by Seventh Duke of York," at 175gs. The bulls of this tribe were also in good demand, and oddly enough very few were bought to remain in the county, Sir Geo. Jenkinson getting a white February calf from Mr. Foster's cow at 40gs. Taking the tribe through, it was an even good lot of cattle, showing in a remarkable degree that stylish appearance for which the blood is so renowned. The twenty-one head, ten of which were bulls, fetched just over 80gs. a-piece, and it was reported that the Siddington herd would be continued with the same family, as several of the other cows were retained. But in three years how prices have risen! The three Siddingtons sold in '69 here rose exactly one-third in value, the three now sold averaging £491 15s. against £360 10s. There was keen competition for them all.

Siddington 5th, not large, but a very even good-looking cow just at calving, went up from 300 gs., and finally fell to Mr. W. W. Slye for 570 gs. A pair of twin heifers, just a year old, were brought in together, one a light the other a dark roan. Tastes differ and doctors disagree, so some fancied one and some the other, but very few thought there was 175 gs. difference between them. The majority fancied the light roan, which was put up first, and Mr. Foster got her for Cumberland at 330 gs.; then Mr. De Vitre fought hard for the other, and got it too, though at 505 gs.

The grand feature of the sale was the bull, Second Duke of Tregunter; and speculations abounded as to his price and destination. Gloucestershire farmers betted new hats upon his value at the market ordinaries, and considering that the 500 gs. asked for a Duke calf in 1869—the price which Mr. Bowly then gave Captain Gunter for him—had now risen to 1,000 gs., it was fully expected that a bull, in the glorious majesty of his bulldoh and plenitude of his power, would fetch over the risky calf price. It was said “one in for him” had been suited with a Grand Duke calf, and others thought his one testicle might go against him in the opinion of noted breeders. His stock, however, fully bore out his procreative powers, and his excellence as a sire made him very desirable, especially as Mr. Stafford announced that his six heifers had just fetched £220 a piece. Still the biddings were not brisk, and the excitement when the glass was put up for him at Mr. Angerstein’s bid of 600 became intense; but slowly the covering fire came out, and Lord Bective and Mr. De Vitre fought on until the former got the bull for 900 gs. amid some cheers from the bystanders. Mr. Samuda took a very useful red bull of the Wild Eyes tribe by him at 105 gs.; and his bull calves also sold well, nearly doubling the average made in 1869. Lord Bathurst presided at the luncheon, supported by a very distinguished company.

COWS AND HEIFERS.

Ruby, by Lord Raglan (13225).—Mr. J. Smith, 30 gs.
 British Queen, by Earl of Walton (17787).—Mr. W. Ladds, 70 gs.
 Gazelle 3rd, by 7th Duke of York (17754).—Mr. Martin, 54 gs.
 Wild Eyes 28th, by 3rd Lord Lally (24408).—Mr. H. D. De Vitre, 120 gs.
 Siddington 5th, by 7th Duke of York (17754).—Mr. W. W. Slye, 570 gs.
 Gazelle 10th, by 7th Duke of York (17754).—Mr. J. P. Foster, 62 gs.
 Gazelle 13th, by 13th Grand Duke (21850).—Lord Chesham, 70 gs.
 Gazelle 14th, by 13th Grand Duke (21850).—Mr. J. D’A. Samuda, M.P., 105 gs.
 Sidonia 3rd, by 5th Duke of Wharfedale (26033).—Mr. Hodinott, 61 gs.
 Gazelle 17th, by 6th Earl of Walton (26078).—Mr. H. Fawcett, 130 gs.
 Gazelle 20th, by 7th Duke of York (17754).—Lord Fitzhardinge, 175 gs.
 Gazelle 22nd, by second Duke of Tregunter (26022).—Mr. E. Hanbury, 80 gs.
 Siddington 9th, by 2nd Duke of Tregunter (26022).—Mr. J. P. Foster, 330 gs.
 Siddington 10th, by 2nd Duke of Tregunter (26022).—Mr. H. D. De Vitre, 505 gs.
 Gazelle 24th, by 2nd Duke of Tregunter (26022).—Mr. E. Hanbury, 65 gs.
 Ruby 4th, by Bates Tertius (21249).—Mr. J. Haygarth, Australia, 60 gs.
 Gazelle 25th, by 2nd Duke of Tregunter (26022).—Mr. J. D’A. Samuda, M.P., 210 gs.
 Gazelle 27th, by 2nd Duke of Tregunter (26022).—Mr. J. W. Wilson, 90 gs.

BULLS.

Second Duke of Tregunter (26022), by 4th Duke of Thorn-dale (17750).—Earl of Bective, 900 gs.
 Fitz Claro (28603), by 2nd Duke of Claro (21576).—Mr. Cooper, 56 gs.
 Captain Tregunter (28136), by 2nd Duke of Tregunter (26022).—Mr. W. S. Cragg, 51 gs.
 Captain Tregunter 3rd, by 2nd Duke of Tregunter (26022).—Mr. H. W. Schneider, 50 gs.
 Wildfire, by 2nd Duke of Tregunter (26022).—Mr. J. D’A. Samuda, M.P., 105 gs.
 Colonel Tregunter, by 2nd Duke of Tregunter (26022).—Mr. Wilson, 58 gs.
 Colonel Tregunter 2nd, by 2nd Duke of Tregunter (26022).—Mr. J. B. Jenkins, 58 gs.
 Colonel Tregunter 3rd, by 2nd Duke of Tregunter (26022).—Mr. T. Simmons, 93 gs.
 Colonel Tregunter 4th, by 2nd Duke of Tregunter (26022).—Marquis of Anglesey, 40 gs.
 Bates Lake 4th, by 2nd Duke of Tregunter (26022).—Rev. R. B. Kennard, 80 gs.
 Colonel Tregunter 5th, by 2nd Duke of Tregunter (26022).—Mr. J. Pulley, 56 gs.
 Colonel Tregunter 6th, by 2nd Duke of Tregunter (26022).—Sir Geo. Jenkinson, 40 gs.

SUMMARY.

	£.	s.	d.	£.	s.	d.
18 cows averaged...	162	11	6	2,926	7	0
12 bulls „	138	17	3	1,666	7	0
30 head averaged...	153	1	9	£4,592	14	0

SALE OF THE BURGHLEY PARK SHORTHORNS.

On Thursday, May 9, for the fourteenth time, Mr. Stratford brought the public together for the purpose of disposing of some of the pure-bred Shorthorns from the Burghley herd. It was considered one of the best lots offered, and as a whole the cattle were brought out in excellent order, under the superintendence of Mr. Walton, who has the management of the dairy farm. A large company was drawn together, doubtless by the presence of Telemachus, the successful prize bull of last year, and the appearance in the catalogue of the pedigree of a red yearling Oxford bull imported from the herd of Messrs. Walcott and Campbell, to be offered unreservedly. This young animal was of good promise, having a fine quality of flesh and hair and a vigorous appearance. He was put up at 300 gs., and, after sharp competition, was bought for Mr. Angerstein, Norfolk, for 500 gs. The twelve Burghley cows and heifers went higher than the eleven bulls, though both brought capital averages and sold very well, being probably one of the best sales held yet at Burghley. Some of the cows and heifers were of the Blanche and Walnut tribes, and consequently very attractively bred. The first cow, Mullen by Fourth Duke of Thorndale, having taken cold, was not offered. Eugénie, lot 2, of the Blanche tribe, bred by Mr. Eaton, a rather small but good-looking cow, went to Mr. Doig for Lord Penrhyn at 81 gs.; while her little white heifer-calf Mr. Eaton bought back for 22 gs. Lot 3, Queen Anne, a large fine cow in calf to Telemachus and a purchase from Penrhyn, went to Mr. Upson for 80 gs. Two Imperial Oxford cows, bred from the old Burghley Innocence family, made 56 gs. (J. R. Singleton) and 43 gs. (Burton) respectively. Two daughters of Mullen, lot 1, descended from Sir Charles Knightley’s Walnut, fetched 53 gs.; Poppy going to Mr. Scratton, who also gave 32 gs. for Poppy’s heifer by Telemachus, and 66 gs., Wild Cherry to Mr. McConnel, Australia. A very useful heifer, lot 8, of the Blanche tribe, was purchased for Mr. Chirnside at 65 gs.; and Wild Thyme, another Walnut, went to Mr. McConnel for

51 gs., the twelve cows and heifers averaging £57 16s. 9d.

The bulls were exceedingly well brought out, among them being several promising young animals. The greatest favourite was lot 9, a September calf by Telemachus, out of Lady Penrhyn, of the Nonpareil tribe, a beautiful hairy roan calf, with a thick broad back, and capital quality; from 40 to 50, 60 gs. was short work, but Mr. Sheffield was not to be beaten, and finally got him for Sir W. de Capel Brooke, at 72 gs. The elder bulls only went for a few guineas over butcher's prices, but Duke of Ardenay, a good yearling, of the Bright Eyes tribe, fetched 105 gs.—the top price—from Mr. Fieldsend, of Rasen. The reserve on Duke of Elvira seemed to be very judiciously withdrawn, but he still fetched 60 gs. (Herrick); and the eleven bulls, including four calves, averaged £51 14s. 8d. Telemachus, who was shown prior to the sale, has greatly developed since his public appearance last year, and bids fair to be one of the most formidable aged bulls of the season. Beyond his £400 of premiums, he has done good duty at Burghley, as a capital stock-getter, especially of bulls.

SALE OF THE HIGH ELMS SHORTHORN HERD, FARNBOROUGH.—Mr. Strafford brought this old stock, the property of Sir John Lubbock, before the public; it has been bred for five and twenty years from Mr. Cartwright's herd at Tathwell, Lincolnshire, and consisted of two tribes, the Strawberries and the Wides. Good bulls had been used, but no particularly fashionable strains of blood introduced, and the herd was kept up principally for its dairy properties, the cows mostly having with their large roomy frames good udders. Mr. Dunn, Dorsetshire, and Mr. Cock, Barnet, were the principal buyers, the best prices for cows being—Lot 6, Azov, 48 gs. (Dunn); lot 8, Ailsa, 35 gs. (Cock); lot 9, Princess Louise, 52 gs. (Cock); lot 12, Ruby, 35 gs. (Marshall); lot 13, Amanda, 33 gs. (Pacey). Mr. Gates gave 29 gs. for Princess of Lorn, a roan yearling heifer, and Red Duke (29735), the bull lately in use went to Mr. Jenkins for 35 gs. The sale realised £714, the 26 head averaging £27 10s. Mr. Roberts presided at the lunch.

SALE OF MR. BARTON'S SHORTHORNS.

This herd was sold by auction at the Grange, Fundenhall, Wymondham, on Tuesday, May 7th, by Mr. Thornton. The herd had been only a few years in existence, and was kept principally for dairy purposes; the cows consequently had been selected from well-known milking strains, such as the Knightley, Frill, Sweetheart, and others well represented in the catalogue. By noon a company of some three to four hundred had assembled, and by half-past one the company adjourned from the table to the ring, where the following prices were realized. Lot 1, Princess Alice, from the Havering Park herd, 30 gs. (Nichols); lot 2, Nelly O'Brien, a pure Knightley cow, 9 years old, 67 gs. (G. M. Tracy); lot 3, Silence 5th, 35 gs. (J. Morton); lot 4, Midnight and bull-calf, 50 gs. (H. Little); lot 5, Sweetheart 13th, 30 gs. (Rev. J. Swarbrick); lot 8, Violet 8th, 43 gs. (S. West); lot 10, Princess of Oxford, 42 gs. (Rev. J. Micklethwait); lot 11, Lady of the Glen 3rd, 41 gs. (C. Horsley, who was a large buyer, from Fakenham); lot 13, Griselda, 38 gs. (H. Little); lot 14, Gipsy, 30 gs. (Rev. J. Swarbrick); lot 15, Princess Beatrice, 37 gs. (E. Paddison); lot 18, Sunbeam, 50 gs. (C. M. Hamer); twin yearling heifers, from lot 4, 80 gs. (C. M. Hamer); lot 19, Charming Oxford, 44 gs. (W. How); lot 27, Patricia 38 gs. (Rev. J. Micklethwait); lot 31, Girdle, 33 gs. (F. W. Park). The bulls,

especially the calves, for which there was a spirited competition amongst the farmers, sold well. Old Patrician, six years old, went to the butcher for 50 gs. Ginx, a yearling, made 37 gs. (R. W. Gausson), and Southerner, a pure Knightley bull, was sold to Mr. B. S. Fryer for 43 gs. The calves ranged from 13 gs. to 33 gs., resulting in a general average of £34 3s. for the entire herd of 44 head.

After Mr. Barton's herd was dispersed, the small select herd belonging to Mr. G. E. Frere, of Roydon Hall, Diss, was brought forward and sold. The stock were of large size and in capital condition. Several of the cows went at very moderate figures, but the heifers and young bulls brought better prices. Lot 5, Roydon Duchess, made 45 gs. (G. Day); lot 6, Countess Sandor, second prize cow at Cambridge, 44 gs. (W. Tippler); lot 10, Una, 41 gs. (C. Horsley); lot 11, Golden Syrup, 40 gs. (J. Gamble). The bull Wellington (30288) had been in use, and he went to Mr. Parker, of Lincoln, for 51 gs. The 23 head averaged £32 13s. 9d. During the sale heavy showers fell, and a thunderstorm delayed the business for some minutes.

SALE OF MESSRS. ARKELL'S SHORTHORNS.—

This sale took place the day after that at Siddington at Draycott, near Swindon, with Mr. Thornton as auctioneer. The catalogue contained fifty-one lots, twenty of which were the property of Mr. Wm. Arkell, of Dndgrove, who has bred from the old Strickland blood for 20 years, and the remainder were Mr. Thos. Arkell's property, who resides at Draycott. Pearl made, with her little red calf, 62 gs., the highest price of the sale, and was bought by Mr. John Homfray, of Penullyn Castle, South Wales. The next highest priced lot was Queen Seraphina, which went to Mr. F. Dodd, of Wallingford, for 58 gs. Novice 3rd, a fine roan heifer of the Stratton blood, fetched 45 gs. (J. Smith, Swindon); and Mr. Colbourn gave 37 gs. for Gentian 2nd, of the same strain. Ursula 12th was withdrawn, but her roan heifer-calf realised 21 gs., and Mr. Bowly gave 25 gs. for Ursulina. Lot 26, a good two-year-old heifer, from Ursula 12th, was purchased by Mr. F. Pope, of Chilrome, for 43 gs. The Rev. E. T. Williams gave 34 gs. for Dahlia, 40 gs. for Songstress and her calf, and 36 gs. for Judy, to go into Monmouthshire. Some of the heifer-calves were brought out in blooming condition, and fetched satisfactory prices. The bulls sold fairly, Pericles 2nd fetching the top price, 50 gs., from Mr. I. L. Hawkins. The sale realised just upon £1,500, the 48 head averaging within a shilling of £30.

SALE OF THE URSWICK SHORTHORNS.—

This herd, the property of Mr. John Croudson, was brought to the hammer by Mr. Thornton early in last month, at Urawick, near Ulverston. It was not of long standing, having been collected during the last few years from the stocks of Messrs. Ashburner, Caddy, Cheney, Jefferson, Patterson, and Schollick. The appearance, however, of some of the Cressida and Blanche tribes in the catalogue attracted a few breeders from a distance, as well as a good local company. Lot 3 of the Shorthorns, a cow by Tenth Duke of Oxford, seven years old, went to Mr. Riley for 70 gs., and Mr. Robertson got a very useful and well-descended cow in Princess Alice at 35 gs. Dr. Cranke secured the two best Cressidas, Lot 6 at 65 gs. and Lot 16, by Mr. Torr's Good Fitz, and a capital milker, at 70 gs., it was said, for Mr. Miles Kennedy. The third lot of this tribe, Cressida Second, by Mr. Slye's Grand Duke of Cambridge Second, who had been in use, was bought by Mr. W. Ashburner for 41 gs. The first Blanche, a red four-year-old heifer, became Mr. W.

Parker's at 51 gs., after biddings from Mr. Ashburner, who got a good, even two-year-old heifer of the same tribe at 56 gs. The heifer calf, Lot 34, from Blanche, was too ill to bring forward. Licinia, a cow of Mr. Schollick's breeding, made 43 gs. (Mr. Mossop), and Mr. Wainman gave 53 gs. for Oxford Wild eyes, a calf from Commemoration, Lot 3. Mr. W. Ashburner repurchased Baron Fennel at 41 gs.; but the finest bull, Lot 39, Baron Napier, a deep roan, and very promising young animal of the Stock burn blood, went cheap to Mr. C. O. Eaton for 60 gs. The 41 head of Shorthorns averaged nearly £34, and the sum total of the sale amounted to about £1,700.

SALE OF THE ACTON PIGOTT HERD.—A large gathering of Shorthorn breeders and agriculturists took place to witness the disposal of the entire herd of Messrs. Graddon and John Perry, consisting of ninety-six head of Shorthorn cattle. This herd was founded forty years ago by the father of Messrs. Perry, who neglected entering his animals in the Herd Book, or much longer pedigrees might have been given. At luncheon over three hundred sat down, Sir C. F. Smythe, Bart., presiding. The whole of the animals, with one or two exceptions, were in their natural store state; and all were in a breeding state, two Martin heifers excepted. The chief attraction of the sale was the Bates bull, Duke of Lancaster, which has now been used two years in this herd, where he has proved himself one of the best sires of the day. There were fifteen yearling heifers by him, beautiful in colour, rich in hair, reminding one of a class at the R. A. S. as they stood together. There were also five very promising young bulls by the same sire, one of which was purchased by the Earl of Sefton. Three of these made the respectable average of £53 11s. 4d. each; the other two, having met with a slight accident and being brought very lame into the ring, were disposed of at twenty guineas each. The sire, although in active service up to the 23rd of April, also came out very lame from a sprain. This was the only animal on which there was any reserve, and he was put up at 100 guineas. The glass ran out at 110 guineas; Messrs. Perry guaranteeing to deliver him sound. Mr. E. Lythall was the purchaser.

AGES:	£	s.	d.
37 Cows and heifers	38	17	0
11 In-calf heifers	47	8	7
15 Yearlings	36	10	10
15 Heifer calves	16	13	11
7 Bulls	48	12	0
13 Bull-calves	15	10	2
7 Females	33	12	5
20 Males	27	1	10

Total amount of sale, £3,125 17s.

The sale was conducted by Messrs. Lythall and Clarke, of Birmingham.

SALE OF THE BRUCTOR SHORTHORNS.—The small herd was disposed of at the farm of Bructor, in the parish of Bourtie. The herd was started about a score of years ago, and has been managed with great care and judgment. At a sale in Berwickshire two females were purchased. One of these was a daughter of a bull South Durham, and the grand-daughter of Uptaker, out of a family some of the members of which, with their descendants, brought the highest prices at the sale of the valuable herd of Mr. Parkenson of Hayfield. The other cow was a daughter of a bull Luck's All, and the fifth in descent from the bull Comet, which was disposed of at Charles Colling's sale for a thousand guineas. After the cows came to Bructor they had calves to a bull Count Fairfax, which was bred at Sittyton, and a son of the celebrated bull Fairfax Royal. The produce were kept with great care, and since then the bulls introduced into the herd have all been of the Sittyton breed. The herd have always been maintained in good breeding condition, and the majority of the calves have been heifers. About a dozen years ago, to keep the herd within the desired limits and maintain the high standard of quality desired, some of the heifers were sold, and annually since a proportion of the young females have been sold off. Latterly the prices obtained for the heifers have

been from 30 to 40 guineas. The bull-calves were also sold privately in the district, the crop of last year having been sold during the spring at an average price of £39 12s. 6d. The herd has been very little known beyond the immediate locality in which it is situated. A few of the animals have been sent to the local show at Inverurie, and have always taken prizes. On one occasion a few entries were made at the Garioch show, but none of the herd were ever sent so far as Aberdeen for exhibition. The herd numbered six-and-twenty animals, and the sale attracted the attention of a very large number of agriculturists. Thirteen cows were offered, and fetched a total price of £356 11s., or an average of £41 5s. 6d. Four two-year-old heifers were sold for £180, or an average of £47 5s. each. Seven yearling heifers sold for £194, or an average of £27 15s. each. Two bulls were sold at an average of £37 5s. 6d. The total sum realised for the twenty-six animals catalogued was £985 2s., giving an average price for each of £37 17s.

THE BATH AND WEST OF ENGLAND SOCIETY.

THE DORCHESTER MEETING.

Of cattle there are 270 entries, made up of 47 Devons, 73 Shorthorns, 42 Herefords, 48 Sussex, 53 Channel Islands, and two pairs of dairy cows. Of sheep there are 188 pens, including 21 Leicesters, 14 Cotswolds, 14 Devon long wools, 56 South Downs, 30 Hampshire Downs, 13 Shropshires, 9 Oxfordshire Downs, 21 Somerset and Dorset Horns, and 10 Exmoor and other mountain descent. Of horses there are 80; and 135 pens of pigs, including 61 Berkshires; making a total of 673 entries of stock, as against 536 at Guildford, 528 at Southampton, 520 at Taunton, 512 at Bristol, 488 at Hereford, and 293 at Falmouth. There are also 12 entries of potted butter, and the entries of poultry are satisfactory, more especially in those classes which properly come under the designation of farm stock. These entries of poultry and pigeons together exceed 420 in number, as against 350 at Guildford. In the Implement department all the leading firms are represented, and care has been taken to exclude trivial articles having little or no connection with the objects of a great agricultural meeting. Not less than 50 special compartments have been allotted to machinery in motion, whilst in the trial fields adjoining the showyard the opportunity will be afforded for witnessing various systems of steam cultivation, including those of Messrs. J. Fowler and Son, J. and F. Howard, Amies and Barford, Williams of Baydon, and others. The annual meeting of the Society will take place on Tuesday, and among other matters to be brought forward will be a proposition to shorten the title of the Society by changing it to the Bath, West of England, and Southern Counties Society. The competition for Mr. Miles's shoeing prizes will take place on Wednesday morning. The exhibition field will be near that of ten years since, when the Society last visited Dorchester. It is a piece of rising ground well drained, and supplied with water from the town reservoir. The Dorchester papers, however, learn with regret, and a feeling somewhat akin to surprise, that the subscriptions towards the expenses of the approaching meeting are still deficient of the amount required. With the event in such close proximity, this backwardness of the county generally becomes a very serious question; but the gravest feature in the matter is the fact that the contributions are less by £500 than were obtained on the occasion of the Society's last visit. Many landowners and agriculturists have failed to contribute at all. As regards the entry of horses, a most unfair puff has been put about by the Islington Hall people, stating that "The Bath and West of England Show takes place at the same time, but it seems that most of the principal masters of hounds and owners of the great hunting studs in that part of the kingdom have made entries of horses for the metropolitan exhibition." Of course there is not much in this, the more especially when we come to remember that one of the hunters exhibited at Guildford last year subsequently beat the Islington champion horse, that is the best hunter of the four classes.

CARMARTHENSHIRE FARMERS' CLUB.

GRASS LANDS.

At the last quarterly dinner, Mr. T. T. Mousley in the chair, the customary raffle took place, when the winners of prizes were as follows: Iron roller, Mr. Philip Lewis, Carmarthen; cheese press, Mr. Dyer, Swansea; turnip drill, Mr. Thomas, Maesyprïol; hand seed-drill, Mr. W. Prosser, White Mill; dung fork, Mr. T. Davies, Wernddu; ditto, Mr. Davies, implement dealer; ditto, Mr. Lewis, Glandulais; ditto, Mr. Jeremy, Cwmdru; hay fork, Mr. Prosser, Tygwyn; ditto, Mr. Morris, surgeon, Carmarthen; ditto, Mr. Campbell; ditto, Mr. Thomas, Capel; ditto, Mr. Harris, Abersannan; ditto, Mr. Phillips, Three Salmons Inn. The subject for discussion was a continuation of a former paper read by Mr. Buckley.

Mr. BUCKLEY said: The subject to-day is Grass Lands, and I introduce it in continuation of my address to this Club last year, when I considered the great advantages that would be derived by the farmer, and by the country at large, from the conversion of a large part of the most suitable arable land of these western counties of the Principality into permanent grass; and I explained in detail what I considered to be the best means of accomplishing so desirable an object. I pointed out the comparatively unproductive state in which a large proportion of these arable lands were always laying under their present course of cultivation; and that they could not be reclaimed from that state, and converted into profitable permanent grass, except by deep, clean, and enriched cultivation, without which the valuable perennial grasses could not be established in the soil and become a close thick sward or turf. I deferred the consideration of the second part of my subject to a future occasion, and I have now the pleasure of bringing it forward. It is the improvement of our "Existing Grass Lands," that is, of our pastures and meadows. Do not the high prices of butchers' meat and of dairy produce increasingly press these subjects upon our attention? I noticed a few weeks ago that to relieve the high price of animal food an honourable member in the House of Commons proposed to lay a restriction on the killing of calves and lambs. It appears to me that if such a measure could be enforced it would be more likely to decrease than increase the quantity of butchers' meat. It is not the increase of the number of animals, but, first of all, the increase of food, by extending and improving our grass lands, that will effect so great and desirable an object. Very many of our farmers already have more stock than they can well support. When we take into consideration the steady increase of the population of the United Kingdom, at the rate of a quarter of a million annually, and the flourishing state of trade, manufactures, and commerce, enabling our artisans and workmen, with their advanced wages, to pay for meat, it may rise still higher in price, and that would not be well even for the farmer. Should not these considerations, seeing that we are farming a part of the kingdom where the climate and soil are naturally and peculiarly adapted to the growth of grass, and decidedly inferior for the production of corn, induce us to give our best attention to the extending and improving our pastures and meadows? But so far from this being the case, do not most of our farmers devote their chief attention to their arable land, carrying to it their farmyard dung and artificial manures for the wheat and root crops, to be again followed by corn, which on this western coast should only be grown as an alternate crop, while their grass lands receive little else than an occasional application of lime and earth? I would here just remark in passing, that if on an average one-third only of our land was arable and cultivated on the four-course, or any other alternate system, we should produce more and better corn than at present. Now, as to the improvement of our existing grass lands. I need hardly say that if the land is wet, the first step is efficient draining: for little or no improvement can be effected without it. But the subject of draining having been so ably introduced and discussed at the last meeting of this Club, I would not now occupy any of your time upon it, but that two branches of that most important operation, particularly applicable to grass lands, were not alluded to. Draining

being a very expensive operation, as shown by the useful examples and statements given by Lord Dynevor and Mr. Brodie, it should not be commenced until the land has been well examined and the cause of its wetness thoroughly investigated; as there are cases in which a considerable surface may be made dry by, perhaps, a single drain, and so save a considerable outlay. The wetness may arise from a spring on higher land that rarely gives an indication of its position on the surface, and if that spring can be tapped by cutting a drain into it, the water may be led away to the outfall by a single drain. Such springs usually show themselves after long continued rain or the breaking-up of a heavy frost, and by, at such times, marking the place or places where the water breaks out, may afterwards be cut down into. In one instance, I have by a single drain dried the side of a hill, and led the water a considerable distance down to a pond near the farmyard for the benefit of the ducks and geese; and in another (where a considerable surface was wetted) to a place where I can divert it from going to the outfall, to irrigate about three acres of pasture. The draining of pure bog or peat land was also not alluded to, some of which when effectually drained may be made good pasture or meadow. It is, I am satisfied, of no use to attempt the draining of this kind of land without cutting through the peat down a foot at least into the clay or sandy clay always found underneath, and which forms an impervious basin by the existence of which the bog has been formed. If the peat is not more than five or six feet thick in the deepest places and an outfall can be found, and if the quality of the peat is such as to have a tolerably good turf on the surface, it may pay well for draining. As an experiment I drained about five acres of such peat, which, I should state, had been attempted to be drained some years before with pipes laid in the peat, which proved a failure, most of the drains having filled up. The drains I had cut four feet deep, and went a foot or more into the sandy clay, except in a few places where I had to go deeper. Over the pipes which were placed at the bottom of the drains a foot of well-broken stones was filled in, and on the top of the stones was placed the surface sod reversed to keep out the peat soil with which the drains were filled up. I then gave the field a dressing of lime mixed with the sandy clay left from the drains, and bush-harrowed in such grass seeds as I considered suitable to the soil. These drains were cut in parallel lines down the slope of the field, and the quantity of water carried off is very large. This draining was done in the winter, and the following summer (which was last summer) I found the grass seeds coming a good plant, and appeared likely to establish themselves. I intended to have gone to see the field this spring and to have reported its state here, but being at a little distance I have not been able to do so. I have, however heard no complaint on that score. I should say that on all soils after draining a dressing of lime or, still better, of lime and earth, is the most suitable application, as there will invariably be more or less inert vegetable matter to be brought into action; and as the sour aquatic herbage will die out, having lost its congenial element, that a sowing of suitable grass seeds should be at the same time bush-harrowed into the surface. I would never plough or break the surface of any grass land, either newly-drained or naturally dry, although foul with rushes, docks, or other trash, if it could be reclaimed without it; for the close sward of turf (proof against the tread of cattle that if ploughed would poach it) will require years to be renewed, and the temptation to take several crops of corn may end in exhaustion and its not returning to permanent grass at all. But if the unevenness of the surface or strength of the rushes, gorse, or other trash, render it advisable to plough, I would not, on any consideration, pare and burn the surface turf, but having with a billhook or other tool cleared the growth or trash which may be burnt, would, with a strong wrought-iron plough and sufficient power, turn over the land—make a summer fallow to kill the roots of weeds, and the following winter and spring work it to a fine even surface. The

soil, by this process, will have become a turfy loam full of organic matter—just such as the gardeners so much prize for making compost. In this I would sow the suitable perennial grass seed without taking a corn crop; but if a corn crop must be had, it should be sown very thin. If two or three corn crops are taken the soil will be robbed of the very elements that the finer grasses delight to grow in, and it will take years and money to repair the loss. I will now assume that the grass lands are dry from having been drained or not requiring it. They vary much, of course, in quality and value, according to soil, aspect, altitude and other circumstances. I do not bring into account the vast breadth of high precipitate mountain land that is not improvable and is only fit for sheep-walks. Now, I will first speak of that large proportion of our grazing lands upon which are reared and fed all those two and three year old steers and heifers that crowd our fairs and are sold and driven in innumerable herds out of the country. These grass lands, we will say, are of medium quality, though they vary, of course, considerably. Now, let us consider the improvement of this extensive class of our pastures. I do not think that they are at all improved or raised in quality by the continuous grazing of these young cattle, or by sheep, without any other assistance, but rather otherwise—that is, that they are in some measure deteriorated by the exhaustion of the phosphates and other elements abstracted to supply the bone and muscle of these growing animals. Now, if instead of all these two and coming three year olds being sold and driven out of the country, a proportion of the freshest of them were kept and turned on some of the best of these medium pastures, and their grazing assisted with a little corn and oilcake—beginning with a little at first, and increasing the quantity gradually as they improved in condition, so as to bring them out fit for the butcher in July, August, and September (just the time to command a good price)—would not these pastures, by this process, be raised in fertility, and gradually become, in time, even capable of fattening without such assistance, or, as a change, would they not afford rich grazing for the dairy cows? And, at the same time, would not the young cattle fed off pay for their corn and cake? I have no doubt but that they would, and leave a profit besides. I quite believe that much of our grazing land may be greatly improved by such process. Turnips and other roots are sometimes carted and scattered over these pastures as an assistance in supporting sheep and cattle, and will be of some advantage; but lands grazed without anything returned to them will require the elements abstracted renewed in them; and as farmyard dung cannot be spared for this class of grass lands, they may be supplied by superphosphate or ground bones, (which will be more slow but more lasting in effect. A dressing of bones is often used on large dairy farms to restore what the cheese and butter have taken from the soil, indicated by the produce of the dairy having fallen off in quantity. And do not our farmers' wives sometimes complain to their husbands that the cows, when turned on certain fields, do not give the thickness of cream and quantity of butter that they used to give when they grazed them at former periods. Other artificial manures, as guano, nitrate of soda and potash, and a variety of chemical manures, have been found to have a beneficial effect on permanent pastures. It requires, however, some knowledge and experience to be able to form a judgment as to what soils, and under what circumstances, to apply some of these. Professor Voelcker instituted during five or six years, a number of field experiments on permanent pastures, which he published in the *Journal of the Royal Agricultural Society*, in 1869. He there observes that the condition under which ammonia, lime, and phosphates act beneficially upon vegetation, are far better understood than those under which nitrates, or salts of potash, may be applied to the land with advantage. And he states that he carried on these experiments with the view of affording to the practical farmer the means of judging for himself when he might with advantage employ nitrate of soda or potash manures. The results of these experiments invariably went to show that the benefit to permanent pastures from each of the last named, applied separately, was so small as not to encourage their use. Of all the manures he experimented with, a mixture half and half of Peruvian guano and mineral superphosphate, gave by far the greatest results. The experiments, which are all tabulated, will be valuable for reference. In the last number of the *Journal of the Royal Agricultural Society* just published, there is a very able article on the manage-

ment of grass lands, from the pen of Mr. H. S. Thompson, of York; and if the combination of chemical substances used by him would produce the same wonderful results in general use (for he states that it is applicable to both heavy and light land), it will prove an important discovery, although a rather expensive manure. And it appears that Professor Voelcker now recommends nearly the same combination. It is—1 cwt. nitrate of soda, 2 cwt. mineral superphosphate, and 3 cwt. of kainit per acre, the cost being about 42s. There can be no doubt as to the excellence of this manure, as an application to grass lands. I should, however, like to try alongside of it the mixture of Peruvian guano and mineral superphosphate, half and half, 4 cwt. of which would come to rather less money, or as I think better still to substitute pure dissolved bones for the mineral superphosphate. A dressing of lime and earth at intervals of six or eight years will be found very beneficial on most pastures, especially if at the same time a sprinkling of perennial seed are bush-harrowed in, such as white clover, alsike, cocksfoot, that is *Dactylis glomerata*, perennial ryegrass, meadow fescue, perennial cowgrass and trefoil, &c. A nice pasture upon which I wintered several two-year-old colts, the winter before last, was so cut up by their galloping and racing about that it looked almost as if ploughed, and I feared it was injured for years; I however took the opportunity of bush-harrowing in a sprinkling of suitable grass seed and rolling, and it now presents an appearance of rich herbage among which I identify those sown quite superior to what it was before. I need scarcely say, that where irrigation can be availed of it should not be neglected, and in this country of springs and uneven surface, water may often be turned on and off the surface by a little contrivance. Meadows that are mown for hay should, if they are to maintain their productiveness, have a coat of good farmyard dung for every crop taken from them, which for this and most other purposes is the best of all manures. Lime or lime and earth may be usefully substituted every sixth or eighth year. It is not an uncommon usage to mow a crop of hay every other year, and to graze the intervening year, without returning anything or but little to the land. This is a good deal the case where the grass is let for the season or year. It is a sure means of deterioration, and will show itself soonest on light soils. The bright green spots of grass here and there over the field, where the dung or urine of the cattle has dropped, tell plainly enough what manure is wanted. Even our very best and richest grass lands require attention not only to keep them clean from docks, thistles, nettles, and other weeds, but to renovate and fertilise according to the draft upon them. If not mown for hay, they may require a dressing of bones, or such manures as I just now named. We have some grass lands, which with the same attention bestowed upon them, would be perhaps equal to any in the kingdom. Would they were more extensive. They are to be found on the alluvial lands here and there skirting our coast, and at the bottom of our beautiful valleys; and some of the slopes rising on their sides are not much inferior. Some of the hilly lands, particularly on the silurian formation, are clothed with grass of superior quality; and on the mountain limestone the herbage, though rather short, is so sweet as to support large and productive dairies. I would here just call your attention to the difference in value, and frequently in rent, between land, in the localities I have just named, that is in tillage and that which has continued in permanent grass. A strong argument surely not to plough, and to return to grass the lands suitable for pasture and meadow. To do this requires time and capital as I have shown in my former address, but when accomplished, only estimate the saving in manual labour, horses, and implements! In conclusion, if what I have endeavoured to sketch out in this and my former address to this club could be realised, by the larger and best adapted portion of the arable lands of these western counties becoming productive pasture and meadow, varying on the different farms according to the nature of the soils, and reserving such a proportion for tillage as would be required for the management of the farm in the production of roots, corn, straw, and clover, in rotation; the result must be more numerous and improved herds and flocks, more productive dairies, and a much greater part of the animals reared being sold off fat. I say herds and flocks improved in size, form, and quality; for although breed does not go in at the mouth as it is sometimes said, no improvement can be effected or maintained without corresponding improved feedings, pro-

tection, and attention, which in effect means the improved cultivation of our grass lands. The stock reared on the farm will always be of the same character as the farm and the farming. I have seen a herd of our native black cattle on a well-managed farm, that for beautiful symmetry and uniformity throughout, it was a pleasure to look at. And I have also seen on a poor, badly-managed farm the same native blacks almost as small and meagre as Shetland cattle. Now that a special interest has at length been raised, for which I believe we are mainly indebted to Mr. Bowen, of Llwynydwair, it would be interesting, and no doubt useful, as intimated a few weeks ago in an article in *The Welshman* newspaper, if a treatise or essay on the origin, history, and improvement of our native cattle could be procured from a pen qualified for the task. It is to be hoped that the forthcoming competition will only be the first of annual exhibitions of our native breed of cattle, increasing in interest, and leading to long pedigrees, and a regularly published herd book, and arriving at a general and undisputed acknowledgment that the improved native black cattle of the three western counties of South Wales rank, for all useful purposes, with the best breeds of the kingdom, and that on their own native soil they have no competitors as profitable stock.

Mr. NORTON (Greenhill) said, without any flattery he might follow that was sometimes the usual course, and state that he cordially endorsed every word in the paper that had been read. To begin with the ground work of all—draining; he felt particularly glad that Mr. Buckley had got that very hobby of which he himself was continually reminded by his own friends. And likewise he was also at one with Mr. Buckley on the question of deep draining. Mr. Buckley proposed to go down to the depth of three feet or even deeper, and recommended that land should be carefully examined before it was drained. Now, he had himself recently gone over a field of which he found that only one-half required draining, and the consequence was that he had ordered some of the pipes to be hauled out of the field again. In the portion that was drained, the drains were put four feet six inches deep, and twenty yards apart. As an experiment, while the drainage was proceeding, he had a hole made between the drains, and covered it over with a shutter as large as a door. Now he did that not to satisfy his own curiosity, because he knew what the result would be. It was to satisfy others. And the result was that after the storm-water had fallen this hole was full to the surface, or to within a foot of the surface. But on the third or fourth day after the rain had ceased, how much water was in the hole? Not a drop, although the soil was very retentive, and a pickaxe would only bring up a wine-glass full at a time. That was the result where the drainage was a great distance apart and deep. And he would even advocate going to a greater depth with drains than four feet six inches. It was the fact, however, that whether the drainage was done in the summer or the spring, the men were reluctant to go down deeper into the soil. The cost also of going down deeper than four feet six inches was great, yet it was his opinion that it would be worth while to expend the money. With the suggestion of refreshing the land by new seeds he quite agreed. He had made some experiments of that kind in land adjoining his own premises, where some alterations had been made. When the *debris* had been led away, either to the Carmarthen Quay or somewhere else, and the soil had received fresh seeds, the pasture had been good and even much improved.

Mr. W. JONES (Llwynygroes), after thanking Mr. Buckley for his lecture, said he might differ from some parts of it, although he agreed heartily with the concluding remarks, believing that there was no kind of cattle that would pay any farmer in the three counties better than the blacks, if properly taken care of. But there was one point on which he did not agree with Mr. Buckley, if he understood him rightly, and that was in reference to breast-ploughing of bog land, which Mr. Buckley appeared to condemn. He had tried the experiment with five acres of laud. It was drained thoroughly from water, and it was so soft that for the first half-year it was impossible to take horses or cattle into it. A neighbour advised him to breast-plough it and lime it. After the plough had gone over it, it was burned, and then it had a heavy dressing of lime, with a little ashes. That was before the very dry year of 1857. After that treatment, he was actually able to keep all his cattle for twelve months on the clover grown from it. Mr. Buckley was old enough, good enough,

and clever enough to bear with him also when he said he was rather disappointed with the lecture, because it did not state what sort of land was best to put in grass.

Mr. BUCKLEY: That was done in my former lecture.

Mr. JONES expressed his regret that he had not heard or even read the former address delivered by Mr. Buckley, because he not only wished to know what kind of land was best for grass land, but also what were the best seeds to sow, and how generally to deal with the land.

Mr. BUCKLEY replied that he went into the whole of those subjects on the previous occasion. With reference to the paring and burning of land, if any land would bear it, it was that with a peat surface, because the surface was a complete vegetable matter.

Mr. HARRIS (Penllwynne) regretted that draining was not more resorted to by the tenants of the three counties, adding that it was almost a disgrace to the agricultural interest of the country and the landlords that it was not more encouraged. He had recently been engaged in draining some bog land, and was happy to say that he had rendered it hard and suitable. Last year he had a heavy crop from that piece of land. At the last meeting of the Club at Llandilo, Mr. Brodie stood up for pipes in draining. Now, he should have been very glad to watch Mr. Brodie making the experiment of draining the piece of bog land to which he had referred with pipes. It would have taken him a very long time to complete the job. However, without entering into peculiar methods of draining, he would say, as a general thing, that draining ought to be encouraged. Every farmer ought to take it up with spirit. With regard to cattle, he did not altogether agree with Mr. Buckley. His own experience with black cattle had not been so successful as he could have wished. He had endeavoured to buy the very best black bull that was to be got, and he had some average black cows. But for the life of him he had been unable to get anything like a good stock of blacks. For years he had been trying to get a good herd of black cattle, and now he was obliged to admit that he found himself in the lurch. He was well aware that his brother held contrary opinions. But the proof of the pudding was in the eating of it; and speaking from personal experience, he was compelled to say that he did not believe in black cattle. It had been said that the black breed was to be improved, but how were they to improve the black cattle? Would they propose to go into Pembrokeshire or Carmarthenshire and look out the best bull? If they did so the chances were, as in his own case, that the calf would be a red one, or sometimes black and white, or any colour except the proper one. If it were possible to get a good pure breed of blacks then he would say—stick to them. But when a farmer obtained a black bull, he was never certain what kind of calf would follow. In that respect he had always had great difficulty. But again he would ask—Where are you going to find a pure black stock to start with? He did not believe such black stock were to be had; although others might have a strong faith to the contrary. He preferred cross breeds; for with crosses good colours were always to be obtained, and there was likewise a great improvement of the breed; in particular there would be an improvement in the carcass. He quite agreed with Mr. Buckley's observations respecting the cultivation of grass lands. It was a great drawback to the principality, and he could not help also saying that it was a disgrace to agriculture to see their beautiful grass lands cut up in that way. Not one tenth of the value was obtained from the land which could be got if the land were allowed to remain in pasture. Look at the Towy valley for example, was there an acre of land in the whole valley that ought to be cut up in the way he had described? Even on the hill sides of the valley he should be disposed to cultivate as little corn as possible. With regard to manures it was evident that every farmer must give back to the land what he had taken from it. The productive properties of the soil could never be maintained unless what was taken out was afterwards replaced. The adoption of bone manure, as suggested by Mr. Buckley, was very much to be desired; it ought to be adopted more and more, although he was glad to say it was extensively used now. Many persons could not believe the benefits derived from scattering a little dust over the soil as it was called, until they were seen. But once farmers were enabled to see for themselves the advantages of using bone manure they resorted to it more and more. As the subject of farming was ventilated from time to time in the meetings of the Club, he

sincerely hoped the result would be an improvement in the state of cultivation, and an improved stock of cattle.

Mr. PHILLIPS (Cowin) differed from Mr. Harris respecting the black cattle. Like Mr. Harris he remembered that at one time he procured what was rather an expensive bull, which was represented to be pure black, but turned out to be quite different. But he tried again, and he was persuaded that the blacks were equal to anything. The only way in which he could look at the question was this—if you have 20 tons of hay with which to feed your cattle, those 20 tons of hay will produce as great results with good black stock as they will with Shorthorns, or any other breed. That at least was his opinion. He was therefore decidedly in favour of the blacks.

Mr. JONES (Penycod) warmly recommended bone manure, although he believed very little of it was used in this part of the country. With regard to the fattening of stock, he cautioned farmers against expecting that their black cattle would fatten much until they were three or four years of age. Before that time they were growing. To try to feed black cattle before they were three or four years of age was not in his judgment a good thing.

Mr. BRODIE (Tyrdail) said, there was no doubt that if the present unhappy war which had begun between labour and capital went on, grass lands would be more the order of the day than they had been in South Wales. In a weak country, having the disadvantage of a humid climate and weak soil, there was no question that if the labour bill reached much higher the farmers would all go to grass. Mr. Buckley had been rather hard upon what he himself had said at the meeting about the shortcomings of drainage. He expected Mr. Buckley would have come out a little stronger and spoken about some of the more suitable grasses and the different manures requisite for the maintenance of a good stock of dairy cows. His complaint against Mr. Buckley therefore was that he had not gone minutely enough into the subject. It was often the case that when land was kept in grass farmers did not treat it properly, but took heavy crops of hay out of it without conveying to the soil any sustenance; or if they did do something it only resembled the washing of a thirsty man's face with a damp sponge. The land might be reduced to a state of poverty by not replenishing the soil when it was needed. He should have been glad also if something had been said about irrigation. The other day he saw at Neath the very good effects of irrigation. How it was accomplished he could not say, but the small streams from the mountain side were turned over the adjoining land, and the result was that earlier grass was produced than was to be seen in this part of the country. It was puzzling to him that the rain they got from the heavens did not produce the same result, while it was obtained from the water which trickled from the coal measures. And it was done also in a place where there was no mountain limestone near. His own experience as to grass lands was not very much; he had been rather fond of the plough. But the advice given by a Scotch landowner to his son was, in his judgment, not far wrong. The son was taken over the meadows by his father, who said to him, "Now, boy, you always be plauting a tree; it will grow when you are sleeping." So it was with grass land. By always giving it something it would grow while they were asleep.

Mr. MORGAN (Llwyn) agreed with Mr. Brodie that if the agricultural labourers introduced into this part of the country the contention for higher wages, farmers would be driven back to rely more upon grass lands. In fact, farmers would have to live upon grass as did Nebuchadnezzar of old. Mr. Harris had said that it was a shame to see so much land here cut up with the plough; and he perfectly agreed with Mr. Harris on that point. Why were the lands in the valley of the Towy cut up as he had seen them that morning? He had seen that day, when on his way down from Llandoverly, land that would grow magnificent grass so cut up. The chief part of the land to which he alluded was cut up by the same person, viz., Mr. Brockie, who occupied under Lord Cawdor. No offence, he hoped, would be taken by his mentioning those things, for he was only echoing what Mr. Harris had said. The suggestion made by Mr. Buckley for bush-harrowing the seeds on the surface of the land was well worthy of attention. So far he believed it had only been tried by very few people, and he himself was amongst those who had not tried it. But he would make the experiment.

Dr. HOPKINS had been much pleased with Mr. Buckley's

paper, although there were one or two things to which he must take exception. There was one about which he had corrected Mr. Buckley on former occasions, viz., his reference to worn-out land growing docks, thistles, and weeds. Now he begged most particularly to remind the meeting that weeds were mostly the effect of manure. If lime were put upon grass lands, or common lime-dust upon the cheapest land that could be got, it would be generally found that weeds would spring up with the herbage. Where a garden, for example, was kept in an excellent state of soil, there was all the greater difficulty to keep down the weeds. Worn-out land would not grow anything but the indigenous weeds of the soil. He should not like the meeting to conclude without calling the attention of those present to that fact; for were it not a fact he would not have stated it. Again, Mr. Buckley appeared in his paper to have lost sight of the main principles of main draining. It was not so much from the large quantity of rain that fell in South Wales that the farmers suffered, but from the rain remaining too long on the surface of the land. He maintained that what was called thorough draining was more or less ineffectual. It was an old-fashioned notion to imagine that if you cut your drains down between the dry and wet lands you will save all beneath. Experience would show that it was quite an absurd idea; and it had been exploded by all the best writers. Another point mentioned by Mr. Buckley was deep draining. That also was another absurdity. If a drain was cut three feet deep, it was quite deep enough. There was no plant permeating the soil whose roots went down more than one foot. Therefore, if the drain went down two feet below that it was quite sufficient. Again, he would repeat that farmers suffered not so much from an abundance of water as from its stagnancy. It much resembled the case where a man had a barrel of beer. If he took a glass of it at a time, it would do him no harm but good. If, however, he dipped his head into it, why the result would be as the Americans said—he would be "drownded." On another point, viz. peat draining, he also differed from Mr. Buckley, and it served to illustrate an old proverb, "So many men, so many minds." Mr. Buckley was quite right when he advised the farmers to go down until they reached the clay. But he wished the farmers to remember that the last of the surface through which they passed next to the clay, if dried and mixed with the rest, formed an excellent manure, if the peat were turned over when so used. With regard to the black cattle many hard words had been said against them from time to time, and they had been disadvantageously compared with the Shorthorns and other improved breeds. He would not deny the superiority of the other breeds in many respects, but they were living in a peculiar country, and he would venture to state professionally that the same quantity of hay which would put seven pounds of flesh upon one animal would also put seven pounds of flesh upon another, the only condition, being that each beast was healthy. If a farmer had a Welsh black ox, well fed, he maintained that the flesh of that animal was better for the table than that of the Shorthorns. It was the same with the native mountain sheep. Much was said about various breeds of English sheep, but he would assert positively that a certain quantity of food would only produce a certain quantity of flesh, and it would produce the same quantity in each animal provided it were healthy. For that reason they ought not to turn their backs either on the black cattle or their mountain sheep. Why was there such a cry for getting the Lincolnshire sheep down here? It was said that a leg of mutton from one of these sheep would weigh five-and-twenty pounds. But everybody had not sufficient money to spend to buy it. The best thing would be for the population to have resorted to what could be produced here. And he would maintain that, taking everything into consideration, the Welsh mutton was superior to any other. The only complaint against their mountain sheep was that when they were tolerably well fed the young rasicals were apt to run it off. In Wales, not being in possession of an over-abundance of wealth, they must practise an old adage and cut their coat according to the cloth; the farmer and butcher must sell to the customer what the latter was able to pay for. There was much talk about big oxen and big prices, but after all they must be practical. He would venture to tell the meeting that a sirloin from a black ox moderately well fed, was superior to a sirloin obtained from one of those over-fed animals. Why, everybody knew that the fat

generally went into the dripping pan. And if it was useful at all, its only use was to make people bilious.

Mr. DAVIES (Cencoe) said the climate of South Wales was humid and suited for the growth of grass. And the prices now paid for animals, whether horses, sheep, or cows, ought to encourage farmer to convert their land into grass land. They might hear of English farmers growing eight quarters of corn to the acre, but that was not the case in Wales. Here it could not be done. When farmers went into their fields to cultivate them, they often found themselves obliged to sow their seed in unfavourable weather, and so there was often a contest between couch-grass and corn. He would maintain that no Welsh farmer could grow a paying crop of corn if he could not first of all keep his land as clean as a garden, which was a most difficult thing to do. The very wet weather, about which so much had been lately said, was favourable to the growth of grass, and it was only necessary therefore that the leaders of the farmers should advise them to put down the best seeds so as to have perennial grasses. In the improvement of cattle they were progressing pretty fairly. Convince the Welsh farmer that there was something better for him to do than to grow root crops and clover; tell the Welsh farmer what grass seeds were the best, and he would be willing to learn his duty and to carry it out. As agricultural matters were now going on it would be absolutely necessary to convert the Vale of Towy and even the Vale of Teify into grazing land. Farmers had no business to break up their pastures at all. There might be some mountainous ground, running into a gorge, where the plough might be safely applied, and he would say—Let them speed the plough there. He was persuaded that Welsh farmers would awaken to a knowledge of their true interests by-and-by. Personally, he was alive to the necessity for encouraging the growth of grass, and would prefer to cast aside the plough and harrow.

Mr. PHILLIPS (Bolauaul) said that upon nearly all the points raised in the opening lecture he was at one with Mr. Buckley. But there were some on which he disagreed with Mr. Buckley, and to them he would confine his observations. He had had some experience in draining bad land; and must say that Mr. Buckley was quite wrong in assuming that as soon as he got down to a depth of four feet in peat he would reach the clay.

Mr. BUCKLEY said he did not state that. On the contrary he said that they might go down five or six feet, or almost any depth before reaching the clay. What he finally insisted upon was that in order to drain peat land effectually a farmer must go through the peat before laying the drain.

Mr. PHILLIPS agreed with that, and believed that in most of the peat land they might reach the clay at a depth of four, five, or six feet. But Mr. Buckley had not told them what ought to be done in such peat land where they could not reach the clay. He could understand Mr. Buckley's suggestions being right, after a farmer had got at the clay, because then he would have a sound hard bottom on which to work. But in Wales they had to deal with peat which apparently had no bottom, and was full of quagmires, giving forth in a number of basins a lot of stuff like soap every five or six feet. In some places as many as twenty of those quagmires might be found over a surface of as many feet. It was then that the farmer encountered the greatest trouble. Before peat land could be drained properly those quagmires must be removed, and good flags must be employed in order to bottom well. Also the peat must be supported on the sides of the drain, to enable the water to flow. Pipes would not do for such drainage, for once the pipes got displaced, which was an easy thing to do, there was an end of them. Stones also were often unsuccessful, because there was a kind of stuff that accumulated in the stagnant water of the peat which would get into the stones and prevent a free flow of the water. Then, again, he thought Mr. Buckley was wrong in saying that a farmer ought not to burn peat land, because in that case he would be destroying vegetable matter. His answer to that was that after the peat was burned there was plenty of vegetable matter still remaining. With respect to grass lands he agreed with Mr. Buckley in the recommendations he had made for their improvement; but he could himself also recommend a very cheap mode of improvement, and that was to change the kind of cattle put to graze the lands. It was a well-known fact that if the same sort of cattle were always kept on the land they would bare the land much sooner than if they were changed. Some fault had been

found with farmers in the Towy valley for cutting up their land. Now, he maintained that the properties of the meadow land were inexhaustible by a rotation of crops, and therefore when the meadow lands were ploughed up much depended upon the kind of treatment they afterwards received. If a tenant farmed properly there was no objection to his taking an occasional crop out of his meadows; for in the case of old meadows they sometimes required cutting up. If hay were continually taken from them the surface of the soil ultimately would not be so fertile as it ought to be. Dr. Hoppkins was wrong in maintaining that black cattle and mountain sheep were as profitable upon good land as other breeds. The object of a farmer was to get quality and arrive at early maturity in his stock; and a Welsh farmer would find if he improved his soil he could get something better than black cattle. This was the reason why farmers should go in for the improvement of seeds.

The CHAIRMAN thanked Mr. Buckley in the first place for the very able and appropriate paper which had been read—in fact, Mr. Buckley, whenever he gave an address at the meetings of the Club, always embodied in it such remarks as evinced a great study of his subject. If the members of the Club were more in the habit, like Mr. Buckley, of making experiments, and deciding in that way any doubtful point, testing certain ideas bearing upon it, it would be very much to their advantage. He agreed with Mr. Buckley and some of the other speakers who stated that in this country farmers ploughed sadly too much. It would be very much to the advantage of every farmer if he ploughed less, but cultivated in a better way. But it was all nonsense to talk of laying down the land in grass. How many farmers in the country could be trusted to lay down grass lands properly for permanent pasture? A considerable outlay was required in order to accomplish it. There was an article in the *Journal* of the Royal Agricultural Society which put the expense of topdressing at from 40s. to 50s. per acre. That, no doubt, would stagger many. But if the land was properly prepared for it, it would be an advantage to make use of that system of topdressing. Great facilities were now open to farmers to make use of recent discoveries of suitable manures for replacing what had been taken out in different ways from the land; and he himself believed, in spite of what Mr. Morgan had said respecting the shame on the part of Earl Cawdor's steward for cutting up the lands near the Towy at Golden Grove—and many would agree with him on the point—that no harm was done by bringing grass lands for a time under a judicious and wise course of cultivation, care being taken to feed the soil by a liberal supply of manures applied to the green crops. But that was not all. It was forgotten that in growing green crops a great deal more than that was necessary. It was not only manuring that was required, but proper management afterwards, and the setting the land down with a proper assortment of grasses for whatever purposes a farmer might wish his land to be ultimately used. If land were properly managed in that way, he was persuaded they would agree with him in thinking that by taking an occasional rotation of crops out of it, the land would be made to produce more than it would if left altogether as a permanent pasture. It was not always desirable to plough up pasture land. The ornamental question had sometimes to be considered; and it was also sometimes difficult to set land down again into good pasture. But if the land had been for a great length of time in grass it was the best plan, although it was rather a dangerous course to advocate, to put it through a judicious course of cultivation, and afterwards lay it down again with the best possible grasses. He believed that even two or three crops might be taken from meadow land with advantage. With respect to drainage, it was the first step towards improvement. But a great part of the draining in this country was a mistake, in that farmers did not go to a greater depth. He was sorry to observe that at the last quarterly meeting of the Club at Llandilo, when the question of drainage was discussed, it was advocated that the best draining was that which secured the flow of water from the surface with the greatest possible speed. That was a great mistake. How few of them knew much about the subject of capillary attraction! It was not the water which fell from the sky that they wanted to get rid of so much as the water from below. They ought rather to search for the places where the springs rose, and get rid of them. By deep draining they would be able to carry away the water from a great depth in the soil, and then the

water from the surface would be enabled to percolate through the ground and support the growing crops. It was not intended by nature that the water should be carried by surface-gutters into the drains, and by them taken to the sea. By proper draining a great expense might be saved. There was no doubt that by draining at a greater depth you might also drain at a greater distance. Recently he saw some draining that had been done on Earl Cawdor's estate in Pembrokeshire, and it astonished him. The land previously was wretched; and if some Welsh farmers had seen it, he feared they would instantly have said the draining was too deep. Those drains were made four feet deep, the ground had become dry, and he was surprised to see the great alteration that had taken place in it. His advice was to drain to a depth of 4 feet 6 inches if it was possible. Never mind if they had to go through a strong rock with a pick so long as it could be done. Go through the rab if it could be done, for ultimately that would be found to answer. The drainage of peat was a different question. Often pipes could not be laid in peat. You may cut the peat like cutting butter, and the cut-piece when dry may be thrown into the drain, and so form a perfect drain that will last for ever. As to burning peat, some of the surface-peat might be burnt to advantage; and when burnt it made an ash that was of good use in cultivation. When you have made your peat-ground more solid by drainage, you may cart different soil upon it, marl or clay; in fact, there was nothing better than road-scrappings, or even sand. This would convert the peat into a different soil. He could well understand the beautiful grasses which Mr. Jones had stated he had obtained from a bed of peat. Another question had been raised—Which was the best kind of cattle for the country? Although not exactly a black-cattle man, he was most careful not to say a word against them. The breed might be very much improved by a judicious selection of bulls and cows from the best stocks in the country; a magnificent start might thereby be made. But that was not all. Farmers were too apt to neglect their young cattle, and the black cattle could not stand it. When a young black beast was starved in his younger days, he never afterwards became what he ought to be. He was not prepared to say that black cattle could

not be made very much better than they were; but it was due to farmers and their shocking bad management that the black stock were reduced to their present condition. The black cattle without doubt were improving, and he did not see why they should not improve still more.

Mr. PROSSER inquired what were the points which the judges ought to take into consideration at the competition for the champion prizes. He hoped Mr. Buckley would touch on that subject in his reply. An interesting discussion might be raised upon it if Mr. Gwyn, Mr. Philipps, or some one would undertake to read a paper about it at the next meeting of the Club.

Mr. BUCKLEY said he understood there was a committee who would determine those points.

Mr. PHILIPPS asked if any of those gentlemen who wished to have the points of the black breed decided, would inform him what points they required in the black cattle more than the other breeds. Were not the points in each breed the same? If an animal was required for the butcher, of course her points would be different from those required for the dairy.

Mr. PROSSER: You do not require the same points in the black cattle as in Shorthorns.

Mr. PHILIPPS: In a milker, for instance, you do. If you want a good ox for the butcher you need certain particular points. I mean to say that if you take a cow, whether it is a black, red, or Shorthorn, you want very much the same points in all. You want breadth, length, depth, quality, and early maturity. You want all these in blacks as well as whites.

Mr. HARRIS (Penllwne) said that black cattle had particular points of their own, and he should like the merits of the black cattle to be discussed.

Mr. NORTON also thought that different breeds of cattle had each peculiar points of their own. Would they judge a Jersey cow by the same points as they would judge Shorthorns or other cows? He should say—No.

The CHAIRMAN finally stated that the Club could hardly discuss the duties of the judges of the champion prizes for black cattle.

The meeting then terminated.

FRAMLINGHAM FARMERS' CLUB.

THE FARMER'S FRIENDS AND FOES.

At the last discussion meeting for the present season the subject for discussion was "The Friends and Foes of the Farm and Garden," introduced by the Rev. E. N. Bloomfield, of Guestling; Mr. Goodwyn-Goodwyn in the chair.

Mr. BLOOMFIELD said, I propose to begin with the animal kingdom, and shall mention a few of the injurious creatures. Let us begin with destructive animals rabbits: As far as the farm is concerned they are an unmitigated evil, giving no compensation for the destruction they cause. The only remedy is to destroy them. It is not very difficult, however, to protect young trees, whether fruit trees or otherwise, against them. I have found a small bunch of gorse or whins fastened with a withe very effective. I could point to a small plantation exposed to rabbits where it was tried, and there was hardly one young tree injured. The gorse remained round them for several years. Rats and mice: Destroy them as far as you possibly can. I think it is a great mistake not to send for the rat-catcher until you are over-run with rats; far better to destroy them when they are few, and so save the corn which the many would eat. In fact, it would be a good thing to go on the Chinese plan—pay the rat-catcher so long as there are few rats, and stop his pay at once when there are many. Unfortunately, I am afraid most of us would be unwilling to pay if we had none. Moles: Where there are drains the mole is certainly injurious; but I suspect it does more good than harm where there are no drains. It destroys great numbers of injurious creatures. No doubt the heaps are unsightly, but if they were knocked about they would often form a good top-dressing. What I have said about the rat-catcher applies to the mole-catcher. You should not make it his interest to keep up a stock. Let us now turn to the birds, and here we find many

friends of the farmer, although he too often looks upon them as foes. Kestrel, or windhover: I should wish to say a word in favour of this pretty hawk. Its food consists almost entirely of mice and insects; and while it thus does great good to the farmer, I believe it does no harm to game, and ought to be encouraged by game-preservers as well as farmers. The fact is, it is often confounded with the sparrow-hawk, and thus suffers for the sparrow-hawk's misdeeds. Barn owls are still greater friends of the farmers, destroying numbers of mice and insect foes; and as they are out at night only, need not be suspected of injuring game. I believe that the good rooks do to the farmer is incalculably greater than the injury. The truth is, we can easily see the harm they do, while we cannot see the thousands of subterranean grubs which they devour. For instance, you will see a flock of rooks pulling up the grass in a pasture. What are they doing? They are devouring the destructive grubs which live at the roots of the grass. Although the rook may do harm to the corn when first sown and when ripe, it far more than repays by destroying the insect enemies throughout the year. Besides, it is easy to keep the rook off the crops for a few months, and have the benefit of its services at other times. The starling is also most useful in destroying insects, especially the grubs, which live at the roots of the grass. They have, I know, been accused of sucking pigeons eggs; but I believe the charge to be groundless. There are three kinds of pigeons which occur with us, the ring dove, the stock dove, and the turtle dove. The turtle dove is only with us in the summer, and does little or no damage. I cannot say the same for the other two. In this neighbourhood I believe almost every one knows the difference between them, but in many parts of England the differences do not seem to be re-

cognised. The ring dove is much larger and of lighter colour, and builds a rude nest in branches. The stock dove is more like our common blue rock domestic pigeon, and generally builds in hollow trees. I am afraid I cannot say a good word for the ring doves, as they are very destructive, especially to peas and young clovers, while they do very little good in return. They are almost exclusively vegetable feeders, and do not destroy wire-worms and grubs as the rooks do. I know that sparrows are detested by the farmer; but I believe they are not an unmitigated evil. They destroy many grubs which would increase amazingly if they were allowed to go unchecked. I cannot leave the birds without saying one word in favour of the woodpecker. It does neither harm nor good to the farmer, but I believe is often considered as an enemy by timber growers. I believe it is, on the contrary, a good friend to them. It destroys many of the insects which injure trees, and never, I believe, bores into sound trees—in fact, a woodpecker's hole is a sign that the tree ought to come down. As to our insect friends and foes, the cockchafer is very destructive to the leaves of shrubs and trees; but the damage it does is of little consequence compared with that done by the larva or grub, which lives at the root of the plant. "Many a fair pasture land," we are told, "is withered, and many a broad field of corn assumes a sickly appearance" through these destructive creatures. You must all of you know the great white maggot, which is the grub of the cockchafer. It takes three years to come to the perfect state, and all that time feeds at the roots. The click-beetles, or skip-jacks, so called from their jumping when turned on their backs, harmless as they are in the perfect state, are the parents of the dreaded wire-worm, that is, their eggs, when hatched, are wire-worms. The only practical way of getting rid of wire-worms is by growing a crop which will not furnish them with food. It is said a wire-worm haunted field may be cured for a time by planting it with potatoes, which the wire-worm cannot eat. Some farmers, I have heard, use soda ash, sowing it with seed, or broadcast. The rooks and starlings are the best helps in getting rid of the wire-worm and the cockchafer grub. Were it not for these we should be far more troubled by these grubs, and even perhaps overrun by them. The turnip-fly, as it is called, is one of the most annoying and destructive insect we have. It is a small beetle which lays its eggs on the young leaves of the turnip. The eggs hatch almost directly, and the grub destroys the leaves. No practical remedy is, I believe, known. In a garden it may be of use to scatter some good lime on the surface as the seeds are coming up. The best beetle I shall mention is the ladybird, or as it called in the hop districts, the fly-gilder. It lays its eggs in the midst of the green flies, or plant-lice, and the grub when hatched feeds solely upon them—in fact, the ladybird is our best help in checking the increase of these destructive insects. Hop growers well know their value, and I doubt not the are just as useful to farmers in general keeping down the green fly which attacks their peas and beans. When ladybirds are plentiful in the spring, the hops, I believe, seldom suffer much from green fly. Destructive as they are in other countries, the locusts and grasshoppers do very little harm in England. The migratory locust does now and then get blown across the channel, but our climate is far too cold for them to multiply here. We often see notices in the papers that locusts have been taken in different parts of England, but in most cases this is a mistake, all kinds of different creature being mistaken for locusts. Everybody knows the green fly or aphid. These plant-lice are wonderfully prolific and increase most rapidly. Hence have arisen many mistakes. People have imagined that they could not come in the ordinary course of nature. Some have supposed they are brought by the east wind; other that they have come by spontaneous generation. And hence they have thought that it was no use to try and stop their ravages. This, however, may often be done when care is taken in the house and in gardens. If the first green fly be picked off, we can often keep them down; but in the fields we must leave them to the ladybirds and other like enemies. The black jack or nigger, so destructive to the turnips, are the caterpillars of a small transparent winged-fly called the turnip saw fly. This insect lays its eggs on the turnip leaf, cutting little grooves to receive them. They grow very quickly, and are very voracious as you all know. No remedy is of any use on a large scale. Rolling will spoil the turnips as effectually as the grub. Trenches have been dug between the infected and free

portions of the field; lime and soot have been tried, but all of little use. In a garden hand-picking is the best plan. The last insect which I propose to mention is the midge. We have, I think, of late years heard but little about the destruction caused by this insect, but twenty years ago it was regarded with great apprehensions. I find from Mr. Goodwyn that you suffered from it three years ago. You probably all of you know the damage which is caused by it. In harvest the crop is found very defective, the ears being full of shrivelled grains. If the ears are examined before the harvest little orange-coloured maggots about the size of a small pin's head will be found—these are the larvæ of the wheat midge. The mother insect, which is very small, lays her eggs within the chaff scales in June. These are soon hatched and destroy the grain, at least it does not swell. At harvest time these are carried into the barn, and when they are numerous may be easily found in the dust. Sometimes the damage done is very considerable. One observer, Mr. Kirby, a Suffolk man by the way, calculated that the loss through the midge in one field he examined was not less than $1\frac{1}{2}$ bushels per acre. Others have put the destruction much higher. Probably the best method the farmer could use where the midge is common would be to burn the dust after thrashing. Fortunately both in the case of the midge and of many other of our insect scourges there is a check provided far more effective than any we can use. There are small flies called ichneumon flies who deposit their eggs in the maggots of the midge, and thus destroy them, and this is one of the most effectual ways of limiting their increase. Our vegetable foes not only include the weeds which cumber the ground and take the place of better plants, but also many ills which unusually go by the name of blights, such as mildew, smut, bunt, &c. With respect to weeds, I will only mention two weeds by name, the dodder and clover rape, both of which are very destructive to clover. They are both parasites, and live by sucking the juices of the clover plant. I cannot but think that the ravages of the dodder might be almost entirely stopped by sending in a man to mow out the infected piece as soon as it begins to show itself; or, still better, if he dug it out. The mowed pieces must be carried away. I know no method of preventing the ravages of the clover rape, that great brown succulent plant that appears so plentifully in clover fields after the first crop has been taken. It has been growing underneath the surface and sucking the clover long before it shows itself. The most probable means of diminishing its quantity is to be very particular to see to the cleanness of the clover seed. I think it is very probable, however, that the seed may be some years dormant in the ground, and in that case I do not know how we can guard against it. Let us now go on to those special diseases of the corn to which I just now referred, which are often called blights. The mildew, with many other blights, as smut, and rust, and bunt, are caused by fungi, in fact, are due to parasitic growths, which destroy or injure the corn. You all know what mildew looks like. The stem and leaves become discoloured, and at length the outer skin splits, and the parasite is disclosed. If you look at the infected plant with a glass which magnifies slightly, you will observe that the spots are dark and rough. Put a small piece under a powerful microscope, and you will see an appearance such as is represented in this diagram. The threads and spaw, or mycelium, is hidden in the straw, but what we see is the fruit or seed vessels. Each spore consists of two compartments, which are filled with spores. But how did the seed enter the plant? Perhaps through the stomata or little openings which abound on leaves. At any rate the mildew shows itself generally at these apertures. How then does the mildew injure the corn? It absorbs the sap which should go to nourish the grain, and is as true a parasite as the dodder. Moist seasons, damp situations, over-manured land, and lateness of crop, all favour mildew; a plant on a manure heap is, in fact, almost always mildewed. And so, again, over-luxuriance will favour mildew. Well draining the land, and keeping the crops free from weeds, will generally prevent the mildew from doing much mischief. Again, you all know the rust, or red robin. Different as it looks, there is good reason to believe that it is the same plant as that which causes the mildew, taking one form or the other, according to circumstances—the state of the weather or plant. Here it does little harm, but on the Continent it is more dreaded than the mildew. The next parasite I would mention is the smut. Some farmers, I have heard, like to see it in the

crops because it is usually accompanied by a good crop. If so, I suppose the explanation is this, that a season which is favourable to the production of smut is also favourable to the corn. As to bunt or bladder brand, or stinking rust, this parasite completely fills the seeds and replaces the flour with a black disgusting powder, smelling almost like putrid fish. The infected grains are of a dark green colour, and at length become brown. If a grain is opened it is found filled with a black greasy powder. When the wheat is thrashed, the infected grains are broken, and the spore stick to the sound grains and ultimately inoculate them. The object of dressing the wheat, therefore, is to wash off the spores, and if possible destroy their vitality. Some farmers dress their corn with arsenic, but I cannot think it is likely to do much good, while there are many great objections to it. All farmers, or nearly all, know something of the parasites which I have mentioned, but perhaps there may be many who have never seen the next—I mean ergot. The grain is completely changed, both in form and properties. It is black, and looks like the spur of a cock. It has long been known to be a powerful medicine. It has not so long been discovered that it causes most dreadful diseases when it has been eaten with corn. Rye is very subject to ergot, and it was suspected that certain dreadful diseases, formerly prevalent in some parts of France, were due to this cause. There seems little doubt that it was so, and it appeared probable that ergot had been the cause of dreadful disease even in Suffolk. It appears from the parish register of Watisham that in the year 1762 several persons suffered from an unusual kind of mortification of the limbs. In this case, no doubt it was due to the ergot of wheat. Where lands are well drained, little or no ergot is to be found; but doubtless at that date there was plenty of wet undrained land to favour its growth. But although ergot is now uncommon on wheat and rye in this country, it is often common on grasses. And it is not unlikely that it may be the cause of some of the mysterious diseases of cattle. Drainage is the great cure for it. I now turn to the last disease of the grain, which I purpose mentioning—the ear cockle, or pepper corn, which is one of the most extraordinary diseases to which wheat is liable. The grains affected by it look just like black pepper corns, and the whole ear is altered in appearance. When the grain is cut in pieces, it is found full of a cottony substance packed close together. If the grain is fresh, and a little of this cottony substance be placed with a drop of water under the microscope, it is found to be a mass of eel-shaped creatures, which wriggle about with great vigour. If, however, the ear cockle has become dry, it must be steeped in water for a few hours before the ear is opened, or they will show no life or motion. Sometimes 40,000 or 50,000 of these little creatures are packed together in one grain. Anyone who has a moderately good microscope can verify this for themselves. It would be a good thing if more time were spent in searching into the wonders of creation, which the microscope reveals.

Mr. G. E. JEFFERSON said, with regard to the subject of dressing wheat, that there was no doubt but that the spores were poisoned by arsenic. Experiments would reveal the fact that strychnine, arsenic, opium, and sundry other poisons actually had analogous physiological action on plants that they had on animals. The great reason for the use of vitriol instead of arsenic was that there was not the same danger, and they both acted in the same way, if not to the same extent, in destroying the spore. With reference to the damage done by the turnip fly, the old remedy was to sow a little mustard for the reason that the fly liked the mustard better than the turnips. They took off the mustard and left the turnip until it got beyond a point where the fly cared for it.

The CHAIRMAN said he had sown every other furrow with coleseed, and he found this more effectual than the mustard, but the difficulty was in distinguishing the plant from the turnip.

Mr. CRACKNELL said he had frequently noticed in a field of corn that four or five bladders would be found on one side of the ear, while all the other kernels were good. He should very much like to know the explanation of that.

Mr. W. CHAMBERS said he had always dressed his wheat with arsenic, and he had given it to his fowls afterwards, and had not found that they suffered the slightest injury from it. He put a quarter of a pound of arsenic to the coomb, and he had no bladders, whilst his friend who dressed the same wheat with vitriol had a good many.

Mr. JEFFERSON said arsenic was the strongest poison.

Mr. J. BARNES said, with regard to the caterpillar on the gooseberry bushes, that his practice had been to place a piece of whin when in full bloom near the bush, and he had not been troubled with these caterpillars.

Mr. PAUL READ alluded to the defective side of the ear of wheat mentioned by Mr. Cracknell, and thought it most probable that the defective side would not be that which was towards the south. He (Mr. Read) had no doubt it would be found on the cold side.

Mr. CRACKNELL said he believed it was on the south-west side mostly, and not on the north side. He referred to the side of the ear.

Mr. PATERSON said he was rather curious as to the whereabouts of the insects which had been referred to when they did not show themselves. When turnip-seed was sown, the insects appeared in legions, and did a great deal of harm; but at the end of a fortnight or three weeks they went away, and the rest of the year we were not even aware of their existence. This was specially so with regard to the blight which affected the wheat-plant. He referred to the animal-blight, and it was perhaps only a fortnight or three weeks of the year that they showed themselves. Did these insects require sustenance, and if so, what did they live upon? It was a serious question whether in providing a series of crops by rotation we did not provide a succession of green crops for these little insects. It was also a serious matter whether the hedge-rows, trees, and plants of various kinds did not supply food for them during the year; and the question suggested itself to him whether it was not possible to starve them out. If farmers were, for instance, to grow a wheat-crop one year, would it not starve the turnip-fly? and if another year they grew turnips and green crops, would it not destroy the midge? Could they not at least manage to destroy these little creatures so that they did not obtrude themselves upon our notice quite so much?

Mr. CRACKNELL said that he had a good deal of dodder in his young clover. He never saw it in young clover before; but he was glad to say that it entirely disappeared. He noticed 20 or 30 places in the young layer, and though he took no steps to remove it, afterwards on going over the field, he could see no traces of it whatever.

Mr. W. B. KENT said he had seen it when the barley was mowed.

Several members expressed the opinion that it would make its appearance again.

Mr. CLUTTEN said that when manure was left in the yard there were to be seen, in vast numbers, what were called fleas. Some had come to the conclusion that they were identical with the turnip-fly. He should like to know whether these little insects were in any way connected with the turnip-fly.

Mr. BLOOMFIELD, in reply, said with regard to the fact to which Mr. Cracknell had called attention as to a particular side of the ear of wheat being affected, he (Mr. Bloomfield) knew of no positive cause. The fungi in entering the plant might affect one part and not another: it was quite possible that one seed might be affected and not the other. His opinion was that they ought to take many thousands of ears, and see if the north side was affected or not, and then draw their conclusions afterwards. Where bladder-brand had shown itself, great care should be taken in the selection of seed, so as to get it as clean as possible where there was no brand whatever. It was an excellent plan to get the seed good and fresh, and change it as much as possible. Whilst adverting to the gooseberry saw-fly, a member remarked that he never saw this kind of insect until the white butterfly made its appearance, and the rev. gentleman expressed his opinion that the white butterfly had nothing to do with it, adding that it never fed on the gooseberry at all. In reply to Mr. Paterson's question, there were very few insects which died in the winter, and many remained in a dormant state, and, as to starving them out, the midge had no mouth. Mr. Cracknell had alluded to having seen dodder in young clover, and to its having afterwards entirely disappeared. It was killed no doubt by the winter. The mildness of the autumn, or a certain state of the season, had caused the dodder to grow sooner than usual, and when the cold weather came in it was killed, and probably would not again be troublesome. It was, however, possible that there might be some of the seed which did not germinate so readily as the other, and it might spring up, but the

probability was it was killed. With reference to the little creatures found in the manure doing harm, it might be that some of those which did harm during the summer months hid in the manure during the winter. Some of them passed the winter in the form of eggs, others as caterpillars, while a con-

siderable number passed the winter in the perfect state, and were found as vigorous as ever when the warm weather arrived, and it was possible that some of them might be the turnip-flies which did so much mischief.

A vote of thanks was passed to Mr. Bloomfield.

STOWMARKET AND CENTRAL SUFFOLK FARMERS' CLUB.

THE SCOUR IN SHEEP.

At the last of the monthly discussions for the season, the subject was "Diarrhoea or scour in sheep and lambs—its varieties, causes, symptoms, and treatment," introduced by Mr. C. W. Sutton, veterinary chemist; Major R. J. Pettivour, a Vice-President of the Club, in the chair.

Mr. SUTTON read the following paper:

I believe it is generally admitted that the subject for our discussion this evening is one of great and growing importance; for the serious losses caused by diseases, of which diarrhoea or scour is a symptom or type, are I fear rather on the increase than otherwise, thus I feel any time spent in the consideration of this subject will not be thrown away. Many of you hold your own opinions as to the source of some of the diseases of which I shall speak, but avoiding controversy, I shall endeavour, in introducing this subject, to adhere closely to facts, knowing that theory will be distasteful to you as practical men. Whatever rules we may lay down on paper, success only attends good management, and the result of success to all flockmasters will depend upon the judgment, care, attention, and knowledge, they bring to bear on every portion of that management, and then we shall hear no more of that meaningless expression, "good and bad luck," so frequently used in settling the matter. Sheep belong to the class ruminants, which have a very complicated digestive apparatus, and a brief consideration of it will not be out of place here. Affections commonly known by the name diarrhoea or scour have their origin in the digestive organs and intestinal canal. The food first enters into the rumen or paunch, next into the reticulum or second stomach, then the third, and lastly the true digestive stomach, the three former being preparatory ones. The food is at first passed into the rumen, and at each subsequent swallowing caused to enter into that organ. The reticulum acts as a supplier of properly masticated and insalivated food to the third and fourth stomachs, in order that in them the process of digestion may be perfectly conducted. From the fourth stomach it passes into the intestinal canal, where it is acted upon by certain secretions, which have the power of separating the nutritive from the non-nutritive. The nutritive parts are precipitated upon the mucous membrane of the intestines, and become absorbed into the system, the innutritive parts into the large intestines, where they are retained for a certain length of time, subject to the continued absorption of any nutritive quality they may then possess. Thus, then, the affections we are considering have their habitation mostly in the intestinal canal, and their rise in the material which may be taken into it, which, if of an irritating nature, will set up a faulty action when it comes in contact with the highly sensitive lining membrane of this canal, and this may also be produced by causes not acting directly upon the intestinal canal, as we shall see presently. It is very important to be able to distinguish and separate one cause of diarrhoea from another, and to discover whether that cause is acting directly or indirectly on the intestinal canal. In any investigation of these diseases, before we can come to a satisfactory conclusion, it will be necessary to endeavour to understand upon what the symptoms really depend. I have frequently had this question put to me: "What shall be done for my flock? they continue to scour, and do badly, in spite of all I can do, and I am constantly losing them." And I find nineteen out of twenty believe that it always arises from something that disagrees with the digestive organs, and treat them accordingly, changing their food, giving corn or cake, but all has been done without good result; and what is the reason of this? Simply because the symptoms were not understood, and thus they have gone on treating their flock in perfect blindness. I wish,

therefore, to call your attention to the fact that although diarrhoea or scour may (to the casual observer) be the prominent symptom, yet it is the result of several causes, such as the effect of simple irritants, improper food inferior in quality, rank or wet and sloppy grass, the action of filaria bronchialis, commonly known as worms in the throat, worms in the intestines, &c., &c. Therefore, we will now go on to consider the most common forms of this disease, with causes, symptoms, and treatment. After weaning, a large number of lambs are lost yearly (by diarrhoea) when placed upon clover where old sheep have been previously fed, or on artificial grasses, and if the weather has been wet and warm, and the lambs eating largely of green, juicy vegetable matter that has not arrived at a state of maturity, the mortality amongst them is great, and nothing short of an alteration of management will disperse the malady. You will remember at our December meeting, during the discussion of the management of an ewe flock on heavy land, it was shown by a practical man, whose opinion we respect, that mangolds grown by artificial manure, when given to ewes, were productive of evil. Now, although his practical experience led him to this opinion, he did not give the reason why; therefore, I will endeavour to solve the mystery. It is this—that the mangolds in a wet and warm season are too quickly grown, or, in other words, are not grown to a state of maturity, and this is what causes all food of like nature to disagree when given alone, or in too large quantity, because it consists of nine-tenths water, and lacks the element in the form necessary to produce flesh and blood, and consequently give strength; but if our friend had given his sheep a nitrogenous or flesh-forming element in the shape of peas, cake, corn, or food of like nature, he would not only have given his ewes mangolds with impunity from evil consequences, but with positively good effect. And, again, if there had been an advanced ripening of the mangolds, the weather having been genial, with scarcely any wet, he would have found his ewes would have done remarkably well with a proper quantity and an admixture of dry food. The practice formerly adopted of stuffing breeding ewes with roots is most unnatural and unhealthy, and how often have we found a good turnip year followed by a bad lambing season? This has been the case in Dorsetshire this year: the root crop was so heavy that farmers were at a loss how to get the ground cleared of them—one of them with a flock of 900 had 300 ewes slip lamb, and lost 40 ewes as well. I have frequently known great losses amongst sheep when first put upon swedes, and especially if the roots are in a rapidly growing condition, and why? They are unripe: the starch has not been converted into sugar, the nitrogenous matter they contained was not in a healthy form, and so irritated the bowels and produced scour; and the plan I have known some good practical men adopt, of lifting the roots, causes part of the water to evaporate, and render them less liable to disagree. It should be our endeavour, whilst attempting to make the most of our flocks, to keep them as closely as we are able to a natural state. Unfortunately, the higher land is farmed, proportionately so do we diverge from the natural to the artificial state, and the more difficult it becomes to rear lambs; for keep that may be thoroughly adapted to fattening sheep, which may be re-folded several times upon the same land during the year, would be highly injurious to a breeding flock, and, in all probability, cause great loss amongst it by the too succulent character of the root crops, or the too luxuriant growth of grass upsetting the delicate digestive process of the lambs, directly by the food they consume, or the ewes' milk being too rich in quality, either of which may produce scour. I was glad to find the view I adopted was precisely the same as that of Mr. Clare Sewell Read, the member

for South Norfolk. In the *Times* of February 1st, he wrote a letter disagreeing with a statement made in a letter in that paper by Mr. John Dent Dent as to the reason of the diminution of the stock of sheep kept in Great Britain. The latter attributed it not only to the great drought of 1868 and 1870, but also to a desire on the part of the farmer to avoid the constant personal care which is necessary for success in the management of a breeding flock, &c. In replying to this, Mr. Read says: "I take exception to the reason Mr. Dent assigns for farmers not keeping more ewe flocks. I believe that the farmer's judgment is as good, and his personal attention as assiduous as ever; but the higher land is farmed, whether grass or arable, the greater difficulty there is in rearing lambs. A good farmer may greatly increase his number of grazing sheep, but lambs require a constant change of succulent food, and ewes never do so well as when they are kept in what farmers term a natural state. Fat sheep may be re-folded several times on the same land in the course of the season, whereas the same treatment of lambs would kill them by scores; and I have known some of Mr. Dent's much neglected grass land, which was formerly well adapted for rearing lambs, to have been so enriched by stock fed on oilcake, that it produced such strong grass as to be utterly unsuited for that purpose," &c. In diarrhoea, produced by these causes, I would adopt the following treatment: First, a change of keep, substituting cut hay, straw, straw peas, corn, or bran for some of the diet they had been consuming. Nature is adopting her own method of cure; therefore, do not be in too great a hurry to administer anything to arrest the discharge; but if the diarrhoea is prolonged after the change in keep has been carried out, give something to assist nature in carrying off the offending matter, for which purpose give to each sheep, linseed oil, two or three ounces; opium powdered, five grains, or a teaspoonful of laudanum in gruel on two following mornings, after which, should the diarrhoea continue, it may be found necessary to give a stringent antacid medicine, for the mucous membrane having become relaxed and weakened by the previous irritation, a faulty action may be set up, which continues, although the irritation which caused it may have been removed. Therefore, in such cases, the following will be found valuable: Take prepared chalk, one ounce; powdered catechu, half-an-ounce; powdered ginger, quarter-of-an-ounce; powdered opium, one drachm; bicarbonate of potash, four drachms; peppermint water to eight ounces. Of this let two tablespoonfuls be given twice-a-day, a proportionate dose to very young sheep. We now come to a disease very fatal to young sheep, and one which, I fear, is greatly on the increase, and from which there have been immense losses to flockowners; and it seems to me somewhat strange that they have gone on losing their flock, not by an odd one or two, but in some cases by scores with a listlessness of effort that to me appears unaccountable. The first we hear of is this, "I am losing a large number of lambs from scour, and I think there is something in my keep that has been prejudicial, or does not suit their digestion;" and when asked what has been done for them, the reply is generally, "I have changed the food, they were on clover, and I changed them to old grass;" or, "They were on bare pasture where the ewes had been, and now I put them on clover; but that makes no difference." Here, again, diarrhoea was looked upon as the cause of the mortality; whereas, upon inquiry, it is found that they have coughed very much, almost incessantly, producing evident distress. The animal does not obtain any relief by the act of coughing, and a great obstruction is put upon the proper aeration of the blood. Emaciation of the frame ensues rapidly ending in death. The appetite is capricious, or almost wanting, the diarrhoea becomes aggravated, the thirst is intolerable, and the poor sufferer madly laps at anything of the character of a liquid, straining with the back arched and feet drawn together, and in this attitude, voids small quantities of very stinking matter, sometimes tinged with blood. This trying, and, if neglected, fatal disease is caused by the presence of a parasite in the throat, and called the *Filaria bronchialis*, a short account of which may not be uninteresting. It appears that if one or two of the worms, though being of different sexes, get into the bronchial tubes, they are quite sufficient to lay the foundation of extensive disease. Passing as far as they can through the bronchial tubes, they enter the air cells of the lungs, and deposit their ova or eggs by myriads, and by means of these foreign bodies an irritation is set up, first in the

lining membrane of the air cells, and then to the lung itself. It is estimated that one of these worms will produce millions upon millions of eggs, and thus we can form some idea of the amount of mischief that ensues. And I have no doubt this is propagated by the expulsion of some of these worms or their ova in the act of coughing, which are again taken up by other lambs whilst feeding. This may account for the flock not all being affected with the same symptom at the same time, but gradually falling as the disease makes progress, by the development of these destructive pests. Any delay in the treatment of this disease makes the cure more difficult; therefore, it will be wise to have a rigid examination of the first dead carcass to determine the cause of death. Professor Simonds says, in making a section of the lung, taking the smallest possible quantity upon the point of a knife just sufficient to soil a piece of glass, you will see in the space of the size of a drop of water, millions of eggs just hatched; and if you can find the worm itself you will see eggs in all stages of development, so that she brings forth the young in a living form, and also in form of eggs more or less mature. Now, the diarrhoea here is not a disease primarily affecting the alimentary canal, therefore it can be of no use to give astringent medicine, nor will a change of food produce any good result. But our endeavour must be to get rid of the worm as it exists in the bronchial tube or windpipe, and to root out the disease which has been produced in the lungs. The inhalation of sulphurous acid gas, or chlorine gas, will be found a ready means, where the flock is large; the sulphurous fumigation will be the safer in inexperienced hands. To do this, place the sheep in an out-house, where they can be made to inhale the fumes of sulphur thrown from time to time upon burning tar, so as thoroughly to impregnate the air. By this means the parasite may either be destroyed, or caused to quit the parts. The chlorine gas fumigation, though an efficient agent, is, in the hands of a careless person, very likely to kill the sheep, but, if conducted as follows, can produce no ill effect: Having driven the sheep into a convenient place, get some chlorinated lime (usually called chloride of lime), and make it into a creamy consistence with water in a dish; upon this pour gently sulphuric acid, and chlorine gas will be disengaged, which, when sufficient has been disengaged to make it unpleasant to the operator, he should retire, taking the apparatus with him, and leave the animals to inhale the medicated air. After this give some such mixture as the following: Take powdered nitre, half-a-pound; common salt, three pounds; powdered ginger, half-a-pound; boiling water, three gallons. When well cold, add spirit of turpentine, 24 ounces, and shake all well together. The dose of this for lambs four to six months old is, two ounces, or four tablespoonfuls. These doses may be repeated every second or third day, for a few times; and in localities where this disease prevails a few doses should be given in July and August. This will often prevent the scouring and mortality so common amongst lambs when first upon turnips. Cake, peas, beans, or corn should be given unsparingly in every case of this kind, and it should be given before the diarrhoea has rendered the digestive organs too weak to assimilate the food, for we know by our own experience that when we suffer from indigestion no food, however good, agrees with us or does us good. So will food not digested in the lamb's stomach, when weakened by disease, act as an irritant to the stomach and bowels, and will pass through the intestinal canal unappropriated and undigested. There are some forms of diarrhoea dependent entirely upon worms in the alimentary canal, which cause direct irritation of the mucous membrane of the intestines. It is always difficult to discover the real cause of this species of scour, but if the sheep are affected in large numbers, and the dung is shining or covered with mucus, and if all the ordinary means of arresting the diarrhoea which I have described fail, and the sheep have a good appetite, but still lose flesh, we may come to the conclusion that worms are the cause. I would then advise the daily use of salt, mixed with the ordinary food at the rate of a quarter of an ounce to each sheep per day, and the following boluses given when the salt is discontinued: Take Venice turpentine, 1 drachm; sulphate of iron, 2 scruples; gentian, 2 scruples—for one bolus, given every second day, until the more urgent symptoms are abated. The next variety of scour we will consider is that which occurs in young lambs, and is first noticed when a lamb that has been healthy, and the ewe yielding a sufficient quantity of milk, is evidently distressed, and the evacuations all of a pale colour,

exceedingly acid, causing great irritation and excoriation of the parts they pass through. This disease is called white scour, and mostly attacks lambs when the ewes are highly fed on turnips, and at the same time with oats, peas, oilcake, &c., or when turned into strong, rank grass. The real cause of this affection I believe to be an unhealthy condition of the milk secreted, owing to the too-luxuriant feeding or highly-nitrogenised food. The young stomach is not equal to the digestive power it is called upon to exercise; the milk becomes coagulated, and the stomach has been found quite filled with curd, even to the weight of three or four pounds. For treatment, first let the management be altered, and in no case does chemistry come to our aid with more decided power. A free acid (lactic) in excess has caused the mischief; and to neutralise that acid by an alkali will always be the most successful plan of treatment. Take bicarbonate of potash, one scruple; carbonate magnesia, half drachm; given in water for a dose, and repeated freely if required; and after a few doses have been given, add powdered rhubarb half a scruple, powdered ginger five grains, mixed with it, and the whole given in peppermint water. And, with such management as I have advised, I feel sure the disease will be quickly arrested. There was a great loss of lambs last year, arising from a diseased condition of the bronchial tubes and lungs, followed by diarrhoea. The symptoms were a distressing cough, with great prostration of strength, suspended rumination, loss of appetite, and quickly followed by death, in spite of every care adopted in nursing, and the disease assumed quite an epidemic character. The flocks were to all appearance perfectly healthy, but were attacked when the weather was wet and the cold winds prevailed. Many were lost before any medicinal treatment was adopted, but those treated by the following means were brought round. The medicine was as follows: Take Fleming's tincture of aconite, two minims; extract of belladonna, $7\frac{1}{2}$ grains; rectified ether, one drachm; water, half an ounce. This dose was given in a quarter of a pint of cool gruel, and repeated as circumstances required; and with good nursing, in which stimulants were freely used, the cases so treated recovered. Here, again, we find the necessity of watching and understanding the causes and symptoms, for upon this the success in treatment entirely depended. And as diarrhoea seemed to be the most prominent symptom, it is sometimes seized upon as being the cause rather than symptomatic of the cause. Now the practical experience we should derive from the consideration of this is, that more care should be taken to protect young sheep during the inclement weather, especially in exposed situations, and upon the first appearance of the disease adopt remedial measures without delay. In concluding my paper, I feel I have imperfectly handled this all-important subject to flockowners; but I trust the discussion that may follow may enable every gentleman interested in breeding and keeping sheep to leave this room feeling that at least he has either given or received information which will be useful in the successful conduct of this particular branch of his profession.

The CHAIRMAN said the first difficulty seemed to be to find out the nature or origin of the diseases from which the sheep were likely to suffer. It might be either the nature of the food, the presence of a worm, or the inclemency of the weather. Those gentlemen amongst them who had flocks—and he was happy to say there were many amongst them, who could give the results of experience—might perhaps begin by giving the experience of this year. They could not complain of the inclemency of the weather this year, but the abundance of the turnip crop might have been a source of disease. The Chairman then named Messrs. Kistruck, Matthew, Noble, Peck, Turner, Hatten, Makens, and Robinson, as gentlemen who might speak on the subject.

Mr. JAMES MATTHEW said he thought he had never had a better supply of food for lambs. He thought grazing sheep were most affected. He had had a good fall of lambs, except at the latter part of the season, and that he attributed to buying in sheep to fill in the flock, which brought in disease, and after that they did not come quite so plentifully. He could quite agree with Mr. Sutton as to scouring. The greater number of the cases was brought on by the farmer, especially when short of food, getting off the first crop and turning the sheep back again to feed the second crop. If no other cause existed that would certainly do it. It mattered not whether it was rye, clover, or grass; if after feeding off the first crop,

the sheep were put upon it for the second, they would scour. Some years ago he bought a lot of lambs of his respected landlord, their Chairman, and turned them on to a second crop of clover, and scouring ensued, and he lost seven or eight.

Mr. HATTEN: Was the first crop fed off?

Mr. JAS. MATTHEW: The first crop was fed off. I had a nice piece of feed and thought I was going to do well with them; but it was too rich I suppose. I have heard dealers say that the lash grass on low marshes would do the same.

Mr. SUTTON said this kind of food would produce disorder, but it was quite a different disease to that which he spoke of.

Mr. BETTS (the Secretary) said he ought to state that Mr. Sutton's paper was prepared last year, and, therefore, it treated more upon what was done last year.

The CHAIRMAN: I have heard it said that there are not so many breeding flocks as there were. I should like to know if it is so, and if so what is the reason for it.

Mr. JAMES MATTHEW said he thought it was so, and that the reason was that mutton had sold so well that grazing had paid better than breeding. Hitherto they had sold a good lamb for £1, but now it was altered. Mutton had been advancing in price for several years, and that he thought was the cause of the change.

Mr. MAKENS said he thought there had been a great decrease in breeding flocks since 1868. Before that he thought there had been an increase in consequence of the cattle plague, as people had kept sheep instead of neat stock. There was a very dry season in 1868, and many people had to give up their flocks for want of feed.

Mr. WOODWARD: But you would not call this a lamb growing district?

Mr. MAKENS: No, certainly not.

Mr. WOODWARD said the light-land farmer had been most cut up by the dry season, but that was not a flock district, and he did not think there had been a great decrease in that district.

Mr. JAMES HEWITT said they might think his argument rather far-fetched, but he thought the decrease in the number of sheep kept might be caused by the high price of barley. On heavy land the farmers had turned their attention more to the cultivation of barley.

Mr. WOODWARD said he thought it was rather the dry seasons which had prevented the keeping of breeding ewes. Previous to the dry seasons lambs had been paying so well that every farmer increased his number. Every one must know that if they got a bad season they could not keep the increased numbers, and so there had been a great decrease, as the flockmasters were so thoroughly beaten by the seasons. But this did not touch the point which Mr. Sutton had brought before them—how to deal with disease. As prevention was better than cure, he would say that he found when they had a large quantity of ewes, on a small space of ground, that frequently caused disease amongst the lambs. They had to traverse the land so frequently that the land became unhealthy for the young lambs. As to the question whether it was desirable to keep all breeding ewes on heavy land farms, his answer was that a very large quantity was not desirable, as they had to traverse the land so often. He would rather, therefore, keep a portion of ewes and a portion of grazing sheep. Mr. Sutton had thrown out a valuable hint in recommending the use of salt. He (Mr. Woodward) had practised it himself by introducing a little salt with dry food for sheep and lambs. He had found it an easy thing to manage, by putting three or four hundredweights of salt to a day's cutting of straw, and a few sacks of malt combs. These were trodden down, and they would find that the mixture would keep sweet and good, and the ewes would devour it greedily, and he had no doubt that it was very healthy for them. His ewes fed upon it the whole year. Another point of importance was to keep sheep and lambs off all succulent food while the dew was on it. The whole flock should be folded at night and remain in the fold till late enough in the morning to secure that the dew was off.

Mr. GOSTLING said he thought the question of the effect of artificial manures on the turnips used for sheep ought to be canvassed. He found in a very old work that the very same effects said to be produced by turnips grown with artificial manure, had been in existence when there were no such manures. He wished Mr. Sutton had distinctly pointed out the

difference between diarrœa and dysentery, as shown in the *post mortem* examination. A farmer ought to know that difference. As to Mr. Woodward's point about over-crowding ewes, he thought the disorder produced from that was not diarrœa, but was more in the nature of a dysenteric attack. Diarrœa was not contagious, but dysentery was very much so. Mr. Sutton had also touched upon white scour, but when once milk was coagulated in the rumen, he (Mr. Gostling) did not know how they were to dissolve it. They could not break it in the stomach as they would in a pestle and mortar. Another thing, too, Mr. Sutton had not mentioned, and that was the administering of medicines to sheep. It was always best to exhibit anything given to sheep in a rather large volume of fluid, and not a small tablespoonful or teaspoonful.

Mr. KISTRUCK fancied children were as liable to this disorder as lambs were. As to feeding lambs on the second crop, he did not think they took any harm if they were not folded on the feed: no doubt that would kill the lambs when they came to the second crop.

Mr. H. CROSSE said it was now a great many years since he was a shepherd, but he once had eight years' experience with a flock of six score, but as that was more than 40 years ago, and great improvements had been made since then, he could not be expected to know much about the matter, and he did not say that he did. The reason he should assign for diarrœa or dysentery, would be that the sheep or lambs were eating food grown by their own dung. It was like dog eating dog, and was undoubtedly the cause of dysentery. He used to have a piece of dry pasture to put sheep on when they were affected with this disorder, and in some parts of Norfolk, they saved a piece of heath land for that same purpose, so as to have a little bit of dry stuff when their sheep began to scour. As to the effect of artificial manures on roots, he had seen the same diseases attributed to roots more than thirty years ago, in one of the publications of the Bath and West of England Society, before artificial manures were thought of. These disorders were owing to the large quantity of nitrogenous matter in the roots, no matter how that might be produced.

Mr. GOSTLING: Would not a sudden change of pasture cause diarrœa?

Mr. CROSSE said he had never had any experience. He had spent some time with Mr. Hudson, of Castleacre, and other farmers round Swaffham, and they some years ago had clayed their lands. They said by doing so they had beaten the seasons, but they lost many lambs on the feed produced by the clayed soil.

Mr. GOSTLING said that in Cumberland, when their sheep did not go well, they were put into pasture where common tormentil or septfoil (*Potentilla Tormentilla*) was growing, the properties of that plant being highly astringent.

Mr. WOODWARD said Mr. Crosse had alluded to putting sheep on to heath land, but surely that could not be so nutritious as their pastures. They could not grow nutritious grasses upon it, and they wanted to know what to do in their own district.

Mr. CROSSE said, when he was shepherd he had 16 acres of land which was covered with oak trees, and when he had anything that did not suit his sheep he turned them on there. The oak trees of course had drawn an immense amount of moisture from the soil and the land was dry, and he put sheep on there in the same way as the Norfolk farmers would put them on heath. He took that as physic, and not as a nutritious grass at all.

The CHAIRMAN said he should like to know whether all breeds of sheep were equally subject to the same kinds of diseases, or whether upon a rich pasture they might graze one breed or one kind of lambs without disease when another breed would suffer.

Mr. CROSSE said he thought the Lincolns, of which breed a shearing often weighed 40lbs., a good example of a breed for a particular soil. They were reared on land which was so rich that a bullock and six sheep was kept to the acre all the summer on the same pasture. In the parish of Thorney they kept six sheep and a bullock on an acre of grass, but in the summer of 1863 they were reduced to two sheep without a bullock. In Norfolk they had less feed and a long-legged sheep to run about after it. In Kent also they had a sheep which

could move about well, where the pastures were not rich, but in Romney Marsh, where the grass was more nutritious, they had a large breed almost as large as the Lincolns.

Mr. WOODWARD said he should like to know if putting lambs upon feed where they had been before would cause dysentery.

Mr. GOSTLING repeated that diarrœa and dysentery were very different diseases. The former was a relaxation of the mucous membrane of the intestines; the latter was an active inflammation of the mucous membrane itself. His impression was that dysentery could be caused in sheep in the same way as it was caused in large bodies of men, as in armies, by a poisoning of the soil. Sheep put back upon meadows which had been fed were eating their own manure.

Mr. WOODWARD said he wanted to know how to prevent diarrœa.

Mr. SUTTON said dysentery was neglected diarrœa.

Mr. GOSTLING said his impression was that as in the human subject, neglected diarrœa was dysentery. When sheep had diarrœa and it went on to dysentery, it became contagious. The cause in the first instance was the sheep taking some improper matter. Mr. Gostling added, in answer to further questions by Mr. Woodward, that simple diarrœa could generally be prevented by a change of pastures; in dysentery they should be kept separate from others, with the same precautions as in the case of fever. He did not think that diarrœa was caused by worms.

Mr. NOBLE said the most difficult cases he had experienced had been in wet weather. He had lost several lambs after feeding on rye-grass. They were generally the best lambs, the most greedy eaters. As to roots grown with artificial manures, he was very glad to see that Mr. Sutton's opinion agreed with his experience as to lifting the roots. Last year he had put some hoggets upon some beet-root, but he took the precaution of pulling the roots three or four days before using them, and gave a proportion of cotton-cake to the lambs. He had never seen any do so well as they did. The roots were grown with three cwt. of guano, three of manure, and three of superphosphates, and he had never lost a lamb, and only one of them was taken a little queer.

Mr. GOSTLING: Don't you think that much was due to the astringent qualities of the cotton-cake?

Mr. NOBLE: No doubt it was; but I have no doubt that if I had not taken the precaution of pulling these roots the result would have been different. I think roots should not be used without the greatest caution. I know a flock-master in this neighbourhood who often pulls them three or four days even in the spring.

Mr. GOSTLING asked if sheep did not often scour after being driven a long way to market.

Mr. WOODWARD said they did, and he thought it was caused by their going a long way without water, and then drinking too much when they got at it.

Mr. PECK said he agreed with Mr. Noble that in wet times sheep and lambs were more subject to scour than at others. His plan had been to give a little new milk mixed with sugar, and a little brandy. That would prevent scour, which, if allowed to go on, would become serious. Lambs should not be allowed to go into the fold in the morning till the grass was quite dry, for if they went upon it wet, they would be sure to scour. He had given brandy on the advice of an experienced shepherd.

Mr. SUTTON replied: With regard to the scouring being caused by the second crop when the first had been fed off, he said it was caused by the manure from the sheep, causing the crop to grow too rank and crude. Let any one eat his fill of green, forced rhubarb early in the spring, and see what that would do for him, and that was just what the green second crop did for the lambs. He agreed with Mr. Woodward that the land being frequently traversed by the ewes must have a bad effect upon the lambs. He was also glad to have so practical a man as Mr. Woodward with him as to the use of salt as a prevention of loss, but he could not see what proportion three or four cwt. to the day's chaff cutting was to each animal per day.

Votes of thanks to Mr. Sutton and the Chairman closed the proceedings.

R E V I E W .

ON THE VARIETIES, PROPERTIES, AND CLASSIFICATION OF WHEAT. By JOHN LE COUTEUR, Esq., F.R.S., Second Edition. London: W. J. Johnson, 121, Fleet-street. Jersey: C. le Feuvre, the Beresford Library. 1872.

Thirty-five years since there was reviewed in the *Mark Lane Express* the first edition of the above work, which was also the first of its kind that had taken a comprehensive and scientific view of the subject, and as such it met with different receptions from the different classes of agriculturists to whom it was addressed. Agriculture had but just emerged from its normal state of routine practice, which the previous generation had learned from their fathers, who had followed it with more or less of success time out of mind. The introduction of scientific farming had started new ideas on the subject; and the lessons taught by the leaders in the movement began to operate in various ways and degrees upon the agricultural mind. Among the inquiries into the mysteries of the new order of things Colonel le Couteur may be placed in the first rank. As soon as he found leisure as a soldier, and possessing landed property of his own, he laid aside the sword and assumed the ploughshare, with the view of practising a series of experiments in the culture of wheat. The practical results of his attempts are given in the work, the most important of which is, that he increased the returns of his own crops to nearly double those which he had previously obtained. In a table of the first fourteen experiments he records, he shows that of two species of wheat that he planted, equal in number of grains, one produced 4lb. 4 ounces of wheat and 3lb. 13 ounces of straw, whilst the other yielded only 1lb. 10 ounces of wheat and 2lb. 5 ounces of straw. On this result he remarks, in the preface, that "the farmer who would have sown his whole crop of the latter variety would probably have been ruined, whereas the superior variety would have enabled him to farm with profit."

One great evil arising from the mixed varieties so often found in the same field is the inequality, in point of time, of their ripening. In a crop the Colonel requested Professor la Garcia to examine, and which he himself considered pure in species, "he drew from three fields twenty-three sorts, some white wheat, some red, some liver-coloured, some spring wheat, some dead ripe, the corn shaking out, some ripe, some half so, some in a milky state, and some green." The consequences of such a mixture to the miller and the baker may be conceived.

M. le Couteur's remedy for this and all other evils arising from such mixtures is the raising a stock of seed-wheat from a single grain, or the grains of a single ear, of a well-ascertained first-rate quality and productiveness. The errors in the choice of seed committed or recommended by men who ought to have known better are very curious. Thus Sir Joseph Banks in a scarce year advised the farmers to sow the thin, shrivelled wheat, as quite equal in productiveness to the best full-bodied sample! It is impossible to say the public injury such advice occasioned in the future produce of wheat in the country, however it might have saved a large amount of the best wheat for consumption in a scarce year, which was Sir Joseph's object. On the other hand, very few farmers paid any attention to purity of seed-wheat, provided the sample was a fair one, and the price not too high. These were the faults of the farmers when the work was first published, since when the system of agriculture has undergone a change so far as the covenants of the landlords generally admit of it, and both the quality and the extent of seed-wheat sown—widely different in point of selection on the one hand, and the more than wastefulness of grain on the other—are concerned. The founding of institutions bearing upon agriculture has diffused knowledge on the subject, and the produce of the soil of the kingdom has greatly increased, subject to the effects of the vicissitudes of our changeable climate, which so frequently baffles the most intelligent practice.

The second edition of Colonel le Couteur's work brings it down to the present period; and we venture to say that no farmer, however advanced in his practice of husbandry, will fail to derive instruction from its perusal, whilst the student in agriculture will do well to master its details with the view of adapting his future proceedings in husbandry to the maxims herein recommended.

FARM COVENANTS.

In Cockermonth County Court, before Mr. Ingham and a jury, Mr. Archer, a landowner at Bassenthwaite, brought an action against Mr. Iredale, a gentleman living at Dovenby, to recover the sum of £23 16s. 3d., being for alleged damage to a field that had been sown down without a white crop, and taking off turnips instead of eating them off with sheep, and other items. Mr. Wicks appeared for the plaintiff, and Mr. Hayton for the defendant.—The plaintiff stated that he was the owner of some land at Dovenby, and at Caudlemas, 1865, he let five fields to the defendant. It was agreed that he was to be an early tenant, and also that when the land was broken up it should be laid down in permanent pasture. It was also arranged that he (the plaintiff) should drain it. When defendant paid the rent at Lammas, 1869, he asked to be allowed to break up Wallet field, but he (the plaintiff) declined to allow him. The defendant was to lay down the whole of the land in permanent pasture, but, instead of that, he had a field called Dophensett sown down without a white crop, the damage to which he estimated at £10; he had carted the turnips off Wallet field instead of eating them off with sheep, which he considered had injured the land to the extent of £7 6s. 3d. He claimed 13s. 6d. damage to the field while carting the turnips off; 30s. for defendant's proportion of the cost of the removal of a fence; cost of a gate, 15s.; and gates and lintels sold by the defendant amounting to £4—in all, £24 3s. 9d., but off that he had allowed 7s. 6d. for part of the gate that had been returned, making the amount claimed.—In reply to Mr. Hayton, plaintiff said the bargain was, that the land was to be laid down in permanent grass and not broken up again.—His Honour observed that it appeared to him that the only thing that Mr. Hayton had to direct himself to was whether the defendant should have mown the grass, or eaten it off; and whether he should have eaten off his turnips instead of carting them off.—Plaintiff further stated, in reply to Mr. Hayton, that the defendant was his brother-in-law, and they had had a quarrel since the land was let.—Mr. William Slater, farmer, was present when the bargain was made between the parties, and heard the terms. He had no doubt that the land was a deal worse in consequence of the way in which it had been managed.—Mr. John Wetherall, farmer, Bassenthwaite, Mr. Joseph Rayson, farmer, Lambfoot, Embleton, and Mr. Joseph Bowe, auctioneer, Cockermonth, gave evidence on the same side.—For the defence, it was alleged that when the fields were taken, both parties were anxious that they should be laid down in permanent pasture, but the defendant had to take one crop of either corn or hay off. He never made any special agreement about Dophensett, but considered that the crops that he had taken off it and Wallet were what he was entitled to by their agreement. With regard to the 30s. for the fence, it was alleged that Mr. Archer should take it down, and that he (defendant) should pay a portion of the cost. The gate that plaintiff claimed had been taken back again.—Defendant denied that he had ever sold anything at Broughton belonging to the plaintiff.—Mr. Thomas Hodgson, farmer, said he was appointed umpire between Mr. Coulthard and Mr. Wetherall, who were agreed upon to assess the damage in this case, and he arrived at the decision that no damage had been done.—In reply to His Honour, witness said it was the custom of the country for farmers to sell off a portion of their vestures. In the case of the field of turnips, he thought that it would be fair to give £2 an acre to an in-going tenant were the turnips had been carted off. He considered that the land was in as good condition now as if it had been managed in the way suggested by the plaintiff.—Mr. John Coulthard, one of the arbitrators, said the pasture field would perhaps have been better if it had been eaten instead of having been mown. It was at present in first-rate condition. He thought that two cwt. of guano to the acre should be allowed for the turnip field.—This was the case, and His Honour pointed out that the real question was, what damage had the estate sustained by the management of the defendant while he had the land in his possession? He thought the other items had been imported into the case to make it up. He also observed that it was one of those cases where a couple of friends had fallen out, and the result was an action of this kind; and, to use the words of an author who was a very good judge of human nature—Shakespeare—"The nearer in blood the more bloody."—The jury after a short deliberation, awarded the plaintiff £13 and costs.

THE CHAMBER TABLE-TALK.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—In your leading article of Monday, you thus comment upon what I said at the dinner of the Central Chamber of Agriculture: "What more could Mr. Read wish for, or what better audience to appreciate the 'genteel' tone in which his own speech was pitched? There were no vulgarities here about Tenant-Right or game abuses or encumbered estates or going in against the Malt-tax, but everything was rose-tinted to local taxation." Now, sir, it so happened that I did not say a word about "Local Taxation," beyond hoping that it might lead to better Local Government, for which purpose I strongly recommended County Financial Boards. I trust I did not perpetrate any "vulgarity" about "Tenant-Right" and game abuses, but I certainly did mention both subjects, as the following extract from a fuller report will prove: "Then it had been said that Chambers of Agriculture dared not discuss two or three questions which were called rather touchy and difficult. His reply was that Chambers had done so and would do it again. When the landlord came and the subject of game was brought up, the Chambers said they did not want to sweep away Game-laws, or in any way limit legitimate sport, but that they were against the over-preservation of hares and rabbits. Then as to the question of Tenant-Right, that was a question which affected the landlord as much as the tenant, because the landlord benefited as much by the application of the tenant's capital to the soil as the tenant did; and in Lincolnshire this Tenant-Right existed; and he contended that if this same principle of Tenant-Right, viz., compensation for good sound unexhausted improvements, was extended all over England, it would be one of the best measures that Chambers of Agriculture could advocate."

I am, sir, your faithful servant,
Honingham, May 16th. CLARE SEWELL READ.

[So much time was cut to waste in the earlier part of the evening, that, as is generally the case, the reporters had of a necessity to curtail the speeches lower down on the list. We gave two full pages of our last week's number to the proceedings of the Central Chamber, but we by no means profess to devote the whole of our Paper to the reports of that body. Had not so many landlords been called upon at the outset, men like Mr. Sewell Read and Mr. Bowen Jones would have had a better chance.—EDITOR *M. L. E.*]

THE FRENCH PEASANT FARMERS' SEED FUND.

[Our readers will remember that the credit of having originated the Fund for the relief of French farmers whose lands were devastated during the war, was due to Mr. J. Howard, M.P., who acted as treasurer. The committee have only recently concluded their duties, and sent in their official report. We have pleasure in giving the following correspondence.]

12, Hanover Square, London, May 14, 1872.

DEAR MR. HOWARD,—The letter enclosed has been sent under cover to me by the French Ambassador, with a request that I would transmit it to you. I need hardly assure you how much pleasure I have in being the medium through which the well-merited acknowledgments of the Government of France are conveyed to you.

Believe me to remain most faithfully yours,
 James Howard, Esq., M.P. VERNON.

Paris, May 6, 1872.

MINISTRY OF FOREIGN AFFAIRS.—PROTOCOL.

SIR,—Being aware of the sympathetic steps you have taken in favour of French agriculturists who were victims of the late war, the President of the Republic has instructed me to express to you his gratitude, and to thank you for having taken the initiative in a work which has rendered such great services to those Frenchmen whose lands were devastated. I am happy to be the medium for conveying these sentiments of the Chief of the State, and to have this opportunity of offering to you, sir, the assurance of my high consideration.

(Signed) REMUSAT,
 The Minister of Foreign Affairs.

Mr. James Howard, Member of
 the English Parliament.

THE SCOTTISH CHAMBER OF AGRICULTURE. TENANT-RIGHT.

At a meeting of the directors to consider the remits from the general meeting in November, and among others that of Tenant-Right,

The CHAIRMAN, Mr. Smith, West Drums, said: It will not, I think, he considered out of place that I should from this chair tender to Mr. Hope our contribution of heartfelt sympathy and very high respect. I am glad to see Mr. Hope present to receive such expression at our hand, and sure I am that it will meet with his ready acceptance. Mr. Hope is one victim more amongst the many to the evils of the system which prevails. The cases of the comparatively obscure pass without much notice, although they may carry with them more crushing effects than have been recently brought to light either in his case or others in the same quarter. It appears to me that by far the most important work of the day for us to take in hand is to seek a remedy for these evils and others of kindred character. The quiet, I will say deferential, appeal has been disregarded by those who should have listened to it, and we are driven to another course of action, whatever that may be, failing as we constantly do to get those claims acknowledged by contract. I do not require to remind you of the true character of these claims. We are no longer dealing with the normal condition of the soil, as did our fathers, restoring to it what of a reproductive character it of itself year by year brought to their hands; but there is now a huge apital employed in the creation of a condition inert of which they knew nothing, and which belongs, on every principle of equity and justice, to him who creates it, and of the benefit of which, in the event of non-renewal, he cannot much longer be deprived. The principle has been given fair effect to elsewhere, and it is to be hoped we shall have a speedy extension of it to other parts of the United Kingdom, where at present so much insecurity manifestly prevails. We can no longer go on under the present system; we must either have these rights secured to us by free contract or by legislative enactment. Of the former I quite despair, unless in special cases; of the latter I do not, if properly and at once set about. It is for you to say what course the Chamber should take. First, That wherever improvements have been made by a tenant in view of a nineteen years' lease, and where it happens, through the death or inability of the tenant that the lease is not carried out to its natural issue, the value of such improvements made by the tenant, so far as unexhausted, honestly belongs to his successors, and ought to be secured to them by law. Second, That to maintain the agriculture of the nation to the height it ought ever to occupy, it is obviously the interest of landlord, tenant, and nation that the value of all feeding stuffs, tillages, and fertilisers applied by the tenant, so far as unexhausted at the issue of the lease, should belong to the tenant, and be made good to him by the landlord on removal from the lands.

Other phases of Tenant-Right applicable to buildings and other matters were mooted, and the secretary was directed to bring the whole question again before the directors, in the view of securing the tenant's rights by legislation if necessary. Such rights, it was thought, should be secured by law, and should be available to every tenant.

THE PATENT LAWS COMMITTEE.

The Committee on the Patent Laws has agreed to the following resolutions, which have been laid upon the table of the House of Commons:

1. That the privilege conferred by letters patent promotes the progress of manufacture by causing many important inventions to be introduced and developed more rapidly than would otherwise be the case.

2. That the same privilege leads to the introduction and publication of numerous improvements, each of a minor character, but the sum of which contributes greatly to the progress of industry.

3. That in the absence of the protection of letters patent, competition of manufacturers amongst themselves would doubtless lead to the introduction of improved processes and machinery, but that it would probably be less rapid than under the stimulus of a patent law.

4. That it does not appear that the granting of pecuniary rewards could be substituted with advantage to the public interest for the temporary privilege conferred by letters patent.

5. That the existing patent law of this country and its administration are in many respects defective, and require considerable improvement in the interests of the public, of manufacturers, and of inventors.

6. That protection for a limited period, and dating back to the time on which it is applied for, should only be granted for an invention on its nature and particular points of novelty being clearly described in a provisional specification, and upon the report of a competent authority that such invention, so far as can be ascertained by such authority, is new, and is a manufacture within the meaning of the law.

7. That letters patent ought not to be granted for any invention so protected until the provisional specification has been open to inspection, or until a complete specification has been deposited fully describing the means of carrying it into effect, and such complete specification has been found by the same authority to accord in all essential particulars with the description of the invention in the provisional specification.

8. That all letters patent should be subject to the condition that the manufacture shall be carried on within the United Kingdom, so as fully to supply the demand for the same on reasonable terms to the public, and with due regard to existing interests.

9. That letters patent shall not be valid for an invention which has been in use in a foreign country unless a patent for the same shall have been granted in such country, and unless such letters patent shall have been granted in this country to the original inventor, his assignee, or authorised agent.

10. That the duties payable on patents should be so adjusted as to encourage inventors to the utmost to make known their inventions, and that their primary application should be to the purposes of a complete and well-organised record of industrial progress, and to an improved establishment for the conduct of patent business.

11. That no person concerned in the administration of the patent law should have a pecuniary interest in the number of patents applied for, granted, or refused.

12. That inasmuch as the property created by the patent law, and the questions arising under it, are peculiar, the tribunal for deciding contentious matters in reference thereto should, both as to its constitution and procedure, be adapted to those peculiarities.

13. That the present condition of the Patent Commission is open to serious complaints.

14. That the Patent Law Amendment Act of 1852 provided that the Commissioners should consist of certain *ex-officio* Commissioners—viz., the Lord Chancellor, the Master of the Rolls, and the law officers of the Crown for England, Scotland, and Ireland, together with other persons to be appointed by the Crown, but no such other persons have ever been appointed.

15. That the Lord Chancellor, the Master of the Rolls, and the two English law officers are now the only Commissioners, and by reason of their other engagements, it is very difficult to get a meeting of the Commissioners, and practically an officer in the Patent Office does the duty of the Commissioners.

Court, last motu, the case of Ismay v. Clark Brothers was tried. The plaintiff, who was represented by Mr. Hough, is Mr. Ismay, dealer in seeds, Wigton; the defendants, for whom Mr. Wannop appeared, are Messrs. Clark Brothers, seed merchants and nurserymen, Carlisle. Mr. Hough said the action was brought to recover damages in consequence of defendants having sold plaintiff purple-top turnip seed—or what ought to have been turnip seed, but turnip it was a very large quantity of rapeseed. Mr. Ismay sold this seed to his customers, and they came upon him for damages, and he in turn now sued Messrs. Clark. The damages were laid at £50, but less would be proved and accepted. The plaintiff was called, and deposed to purchasing the turnip seed in the early part of last year. He sold portions of the seed to Mr. Saul Steel, Mr. Mathews Mr. Dodd, Mr. Rome, Mr. Carr, Mr. Wills, and Mr. Barnes—all farmers in the neighbourhood of Wigton. Some time after the sale, these several parties made complaints to him about these seeds, about one-third of which came up rape. He saw the crops growing himself, and he thought one-third of the seed was rape. He had agreed to pay Mr. Saul Steel £5; he had paid Mr. Mathews £5, Mr. Dodd £7, Mr. Rome £3; agreed to pay Mr. Carr £5, had paid Mr. Wills £2, and Mr. Barnes £8,—total £35, the actual amount of damages sued for.—Mr. Wannop cross-examined plaintiff, and elicited that he had sold 19lb. more seed than he bought from defendants. He added, however, that he sold the whole of Messrs. Clark's seed before selling any other.—Mr. Barnes, Mr. Steel, Mr. Mathews, and Mr. Wills were called, and testified to the damage they had each sustained in consequence of the seed being mixed with rape.—Mr. Wannop said the defence was that Mr. Clark put the seed up himself. He had two warehouses—rape in one, and other sorts of seeds in the other. He put the turnip seed up himself, and had no complaints from other people except from Mr. Ismay.—His Honour said the evidence very strongly showed that the seed was not mixed by Mr. Ismay; and Mr. Clark might be quite right that the seed was not mixed by him. It might be mixed when it came into Mr. Clark's possession; and they would have their remedy in suing those who supplied the seed to them. A material point in the case was that Johnson got some seed at the same place and it was partly rape. Mr. Clark's honour was not involved; there was no dishonesty, no fraud in the matter whatever. Mr. Clark might see it was quite possible a mistake had been made. This was not the first case of the kind he had had by many. As the evidence stood it showed that Mr. Ismay had entirely exhausted the bag he got from defendants, and every person he sold it to found it contained rape. Then another person, who got twice the quantity of Mr. Ismay, complained that it was part rape.—Mr. Johnston was called and said he bought two bushels of turnip seed from defendants. No one complained except a Mr. Miller, who said it was mixed with rape.—His Honour entered a verdict for plaintiff for £35, subject to reduction if the parties who claimed damages from Mr. Ismay agree to take less than the sums mentioned.

A TENANTS TRESPASS CASE.—A meeting of Caithness Justices in Quarter Sessions was recently held for the purpose of disposing of an appeal by Mr. Munro, jun., Mains of Freswick, against the decision of the Wick Justices convicting him of trespass, Mr. Munro's defence being that being entrusted by his father with the charge of the farm, and the ground on which he was charged with being found trespassing being part of the farm, he was entitled by law to enter the land and destroy the rabbits on it. The bench was occupied by Sheriff Thoms, who presided, Major Horne, Captain Rutherford, Bailie Bain, Messrs. W. R. Tait, Hugh Davidson, George Brown, and James Hay. The appeal stated that the evidence on which the conviction was based was unsatisfactory and contradictory, and that the appellant had a right to do what he was charged with. Mr. J. M. Sutherland appeared for the appellant, and Mr. Mitchell, Fiscal, for the Justices. The evidence was again led, Andrew Stevenson, gamekeeper, deposing that on the 26th December he had found Mr. Munro on the links of Freswick with a gun, a bag, and two dead rabbits. Mr. Munro, sen., deposed that his son was his manager, and was authorized and instructed by him to destroy the rabbits, which had done great damage to his crops. Mr. Sutherland and Mr. Mitchell having addressed the bench, the Justices retired to a side room, and after a quarter of an hour's consultation returned, when Sheriff Thoms announced

SELLING MIXED SEEDS.—At the Carlisle County

the decision of the bench. His lordship stated that the law had decided that a tenant had a right, unless prohibited by his lease, to kill rabbits on his farm. In this case there was no proof of any prohibition, and the assumption therefore was that Mr. Munro was not prohibited. The law had also held that a servant might, if instructed by his employers, go on his farm for a like purpose, and the question now was whether the son of Mr. Munro was in that position. Taking the evidence as a whole, and looking at the presumption of the law, which was on the side of the accused, the inference which the bench had drawn was that the appellant was authorized by his father, and had not therefore been guilty of a breach of the statute. The bench therefore had unanimously sustained the appeal. Mr. Sutherland claimed expenses, which were refused by 5 to 3—Messrs. Brown and Davidson and Bailie Bain being for granting them.—*Northern Ensign*.

IMPLEMENTS ON TRIAL.—An action has been recently brought before the Sheriff-Substitute of Dumbartonshire, raised at the instance of Messrs. Brigham and Bickerton, agricultural implement makers, Berwick-on-Tweed, and their mandatory, against Mr. James Robertson, farmer, Gartshore, Kirkintilloch, for the price of a reaping machine furnished by the pursuers to the defender. The question at issue was whether, considering the nature of the transaction, and the practice of the pursuers to allow a preliminary trial of the machine, the defender could be understood to have purchased the machine. The Sheriff-Substitute found that no effectual contract of sale had been established, and therefore absolved the defender and found the pursuers liable in expenses. Against this judgment the pursuers appealed, and Mr. Sheriff Blackburn has just issued an interlocutor, reversing the decision of his Substitute, chiefly on the ground that while the pursuers are in use to allow five acres of grass or grain to be cut on trial before holding a purchaser bound to keep their machines, the defender cut all his hay crop with it, amounting to sixteen acres, and made no complaint, and that afterwards while using it on his grain crop, and finding it did not work well, he still did not offer to return the machine, but employed a local smith to repair it. It was only when asked for payment that he expressed dissatisfaction. The Sheriff therefore decreed for the full sum claimed, viz., £26, with legal interest, and expenses.

BUYERS' AND SELLERS' RISKS.—In the case of *Martineau v. Kitchen*, the Court of Queen's Bench has just decided an important point of law affecting the commercial practice as to the risk of undelivered goods at the sellers' warehouses. According to the report, the question arose as to about 900 out of 1,000 sugar-loaves sold by the plaintiffs, who are sugar-refiners, to the defendants, who are sugar-brokers, in January and February, 1870. According to the terms of the contract, the payment was to be in a month, the goods to lie for two months at the sellers' risk, and to be weighed on delivery to ascertain the amount for payment. Towards the end of April, after the two months had expired and payment had been made, a fire occurred on the plaintiff's premises, by which the 900 loaves undelivered were destroyed; and the dispute now was whether the plaintiffs were bound to pay the defendants a portion of the insurance money recovered in proportion to the value of the loaves to the total stock. The insurance upon which the plaintiffs had received was a floating policy, insufficient to cover their own risks, and in no case, they maintained, could it apply to the defendants' goods, which were at his own risk. On the other hand, the defendants relied on a case decided in 1826, where goods had been sold at a certain price to be weighed before delivery, but were burnt before they were weighed. The Court gave judgment for the plaintiffs, holding the contract to be clear that the risk, after the expiry of two months, was to be taken by the buyer, and that the case was distinguishable from that relied on by the defendants, for the price was to be and had been paid on an approximate estimate of weight, though no doubt the exact amount was to be adjusted afterwards on the ultimate delivery of the whole. The Lord Chief Justice remarked that no doubt, in general, if the amount remained to be ascertained by weighing, the property did not pass to the buyer. But there was nothing to prevent the parties from agreeing that the property should pass as specific goods before the amount was ascertained, and here the hought they had so agreed.

SALE OF MR. LARKING'S SHORTHORNS AT

ASHDOWN, SUSSEX.—On Thursday, May 23, Mr. Stratford sold by auction fifty head of Shorthorns from the herd belonging to Mr. J. W. Larking. The sale attracted a number of well-known breeders, including the Earl of Dunmore, who presided at the lunch. The cattle were brought out in good healthy order, and some of the young stock by Duke of Kirklevington were much admired. Two heifers, not included in the sale, were preparing for exhibition at Dorchester. These created some little curiosity, as well as the young bull, Grand Duke of Geneva, bred by Mr. Lency from the imported American 700 gs. Duchess heifer, and whose stock appear to be of great promise. For the several lots advertised there was not very brisk competition, and some of them were knocked down at what were considered "bargains." The following are the more important prices: Lot 5, Florentia 6th, 51 gs. (Abbott); lot 7, Florentia 8th, 50 gs. (Lord Dunmore); lot 8, Elderberry, 48 gs. (Kay); Lady Knightley, down calving, after some sharp bidding went for 105 gs., the highest price of the day, to Mr. Godwin; lot 13, Science, said to be a purchase from Havering Park, was bought by Mr. Lency for 100 gs.; her heifer, calf, a red, seven months old, quite the plum of the sale, and by the third Duke of Geneva, went for 90 gs. to Mr. D. McIntosh; lot 14, White Butterfly, a very useful cow, 49 gs. (Nisbet); lot 16, Ursula 25th, 36 gs. (R. W. Gausson); lot 19, Pride of Aylesford 2nd, 47 gs. (R. W. Gausson); lot 18, Ursula 26th, 36 gs. (Smith); lot 21, Florentia 24th, 61 gs. (Laythan); lot 22, Flourish 2nd, 42 gs. (Tyser); lot 23, Lady Adela, 61 gs. (Nisbett); lot 24, Flourish 3rd, 62 gs. (Collard); lot 27, Crystal 6th, 43 gs. (Rutley); lot 28, Moonbeam, 22 gs. (Cross); lot 30, Pride of Aylesford 4th, 43 gs. (Woodhouse); lot 32, Rubina 3rd, 39 gs. (Abbot); lot 34, Crystal 7th, 40 gs. (Kingsnorth); lot 35, Flourish 5th, 30 gs. (Kingsnorth); lot 36, Flourish 6th, 54 gs. (Kingsnorth); lot 41, Crystal 8th, 49 gs. (Abbott). Lot 1, bulls, Duke of Kirklevington, 50 gs. (Fox); lot 3, King of the Forest, 46 gs. (Gibbs); lot 4, Frankenstein, 34 gs. (Godfrey); lot 9, Upstart, 38 gs. (Blyth). Two bulls were offered, the property of Sir Curtis Lampson; Forest King, a roan yearling 56 gs. (Laythan), and Knight of Geneva, a roan calf by Grand Duke of Geneva, 50 gs. (Blyth). The sum total of the sale was over 2,000 gs., the average being about £43 for the 30 head.

SALE OF MR. F. LYTHALL'S SHORTHORNS, AT SPITAL, BANBURY, ON MAY 24, BY LYTHALL AND CLARKE.—Mr. Lythall parts with his herd on account of his farm having been purchased by the town of Banbury for sewage purposes. The stock combined some of the fashionable and valuable strains, several of the females being by the Milcote bulls, Lodowick (20136), Fashion (23913), Hilarity (28856), and Monitor (24615). There were also three heifers by Mr. Pawlett's Fitz Killerby (26166), the sire and grand-sire of some of the higher priced stock at the recent Beeston sale. About one-fourth of the animals sold were of the Star family, obtained originally from Mr. Townsend, of Sapcote, a herd distinguished for its extraordinary milking properties. Subjoined is the day's proceedings:

	Average.	Total.
28 cows, heifers, and calves ...	£40 8 1/2 ...	£1,131 7 6
5 bulls and bull-calves ...	26 15 6 ...	133 17 6
33 head averaged	£38 6 9/4 ...	£1,265 5 0
18 pigs of the large white breed		69 9 6

Total amount of sale £1,334 14 6
 The highest price was 120 gs. for Princess of Killerby to Mr. J. W. Wilson, while Mr. Upson gave 81 gs. for Princess Emily by Tulip, and Lady Lavender went to Mr. J. W. Wilson for 66 gs., and Miss Harris to Mr. Johnson for 56 gs.

THE DEVON COUNTY AGRICULTURAL ASSOCIATION.

MEETING AT EXETER.

So far as the county be concerned the first meeting of the Devon Agricultural Association has been held under somewhat discouraging auspices. As we wrote in anticipation, the North Devons and South Hams united "to defend their capital against the approaches of the invading Shorthorn." And, alas! they failed to do so, as a mere handful of roans and whites beat whole armies of Hams and Devons, which numbered in all a hundred and thirteen entries, while the Shorthorns reached to no more than twenty-three rank and file. The best of all the bulls was a Shorthorn, and the best of all the cows and heifers was a Shorthorn; as what tended to render their defeat the more noticeable was the fact that amongst the Devons were some very famous animals; first and second "Royals" at Wolverhampton, and often distinguished elsewhere, such as Duke of Flitton 5th, Cinnamon, Master Harry, and Fair Rosamond. The Shorthorn list on the contrary did not include the name of any animal of established repute; and although there may be a promising young one or two, like Messrs. Hosken's best bull, coming on, there has seldom in these times been a more mediocre display, either as regards numbers or merits, of this renowned breed. There were three all-aged bulls entered, to which the three premiums were duly awarded, and the first and second have been winners about home, but they could hold no great rank in good company. There were in all two two-year-olds; and an improving yearling bull, Duke of Oxford, the last calf by the Second Earl of Oxford, and an own brother to the Hayle Countess of Oxford of last season. This is a smart blood-like young bull, with a fine touch and some good masculine character about him, but at present he is scarcely ripe enough for the show ring, as he requires to fill up and level out before he can quite please the eye of the connoisseur. The three cows were all good, as we fancy Mr. Pollard's third prize more than we do the second, while the actual winner is a small delicate but very blood-like heifer, showing at some years younger than the pair from Blagdon. Little Nelly's chief triumph, however, was in beating the two-year-old, an own sister to Countess of Oxford, and a good spreading heifer for best of all the females. In fact, from the first the Shorthorns threatened to do a deal more with the cows than the bulls, and either the best cow or the best heifer of her class might have won outright.

So far as performances go the fifth Flitton is the best Devon bull of his day, but he is now not only lopsided but so paunchy and altogether overfed as to be no longer a show animal; and it was said that the two other judges held out for some time against the Devon man, as they would have done well to have decided by a majority. We reported the fifth Duke as growing "worse and worse" at Wolverhampton; and the Royal judges subsequently expressed their fears that "from apparent over-feeding his future usefulness will be to a considerable extent limited, which with so valuable an animal is to be very much regretted." These fears have apparently been fulfilled, and a far more taking bull at Exeter was Lord Falmouth's Jonquil, long, level, and slightly, but with a touch which will always tell against him. In the two-year-old class the Exeter judges put the Royal reading all to the right or wrong-about. Thus, Lord Falmouth's Cinnamon, first at Wolverhampton, was now commended; Lord Falmouth's Kingcraft, commended at Wolverhampton, now second; and Mr. Farthing's Master Harry, second at Wol-

verhampton, now first. Very crack animals, all these, and yet all succumbing to a local Shorthorn. The Stowey bull has gone on well, having furnished famously on to a very true frame, but he is just shifting his coat, so that he will show better and better, as he is probably now at all points the best Devon of his year. Kingcraft, like his namesake, is very stylish; but Cinnamon is growing mean behind, and the fresh placing here would look to be justified. The third bull, Earl of Hexworthy, was second to Master Harry, at Guildford; but our choice would the rather rest on Mr. Jackman's couple of yearlings, sturdy, resolute young bulls, full of fine character, and the better, as the younger of the two, showing more promise than anything on the ground, while they were both a long way before the rest of the class. Mr. Povesland's Queen is a handsome, useful cow, well worthy of her place; but there was a deal of discussion over the placing of the second and third, as there was also over the first and second heifers in-calf or with calves, and certainly on the day Mr. Farthing's, straight sweet and light of bone, looked to have all the best of the class. The one put over her is small and bloodlike, but much pulled down from calving; and here the credit of the once famous Barton herd rested. The award over the first and second yearlings seemed to be set on a directly different principle; for Fair Rosamond, of naturally great substance, is positively disfigured, if not already ruined, by over-feeding, while Mr. Burton's Graceful realizes her title in her appearance, being of a very neat or more decidedly elegant stamp. There were some went for Rosamond as the best of all the cows, but her gaudy patchy quarters would have put her out with any but a bench of butchers.

The South Hams, rather darker in their coats than we had remembered them, are not show stock, and will never be known far away from home. They are bountiful milkers, and the steers grow and feed to great size and weight. The male animals, however, are plain, many with mean sour heads and gaunt frames; but the cows are altogether more "likely" stock, with broad hips, good udders, and not without a certain comeliness in appearance. During that terrible downpour on Thursday we took shelter by the side of old Beauty, quite a grand cow for her age, and good enough, as it seemed to be first, although, when the weather cleared a little, only placed second in her class. There was a small but creditable entry of Channel Island cattle, where the more refined Jerseys were set off by a Guernsey or two, while the best of the best class of cows was home-bred by Mr. Digby at Sherborne.

There were knowing people who said of the horse-show at Guildford last season that it was simply discreditably, that the entries were only fit to put in a parish pound, that they had seen far better horses in a little country fair, and so forth, the probability being that these self-established authorities know rather less about horses than they do about elephants. Whereas, as we stated at the time, "though small, the show was, in places, by no means bad, as many of the prize horses would promise to hold their own against far greater competition," and the Guildford prize winners have been winning ever since. So, at Exeter in a very good class of four-year-old hunters, the first-prize horse, Mr. Battsam's Bismarck, fairly placed himself, as every one saw in a moment how superior he was to his fellows, and yet at Guildford Bis-

marek was only second in his class, where his owner admitted he was fairly beaten. The chesnut has gone on capitably, having fined a bit, but with great power and a rattling goer when extended, despite his shoulders being not quite right. Mr. Michelmore's second is a more useful than showy horse, and he requires carefully looking over, as at the first glance he is rather short and common; while there were some other very nice nags in the class. The great show of the day, however, was a mixed entry of two and three-year-olds, which the judges generally commended. Both the first and second were brought up about Totnes by Mr. Trist, and both are full of promise; it being a very doubtful point whether the three-year-old by Preceptor placed first, or the two-year-old by Acrobat put second was the better, as even one of the judges allowed that Acrobat might grow into the more valuable horse of the two. Knowing Devonshire as we have done for many years, the improvement evinced by this class in the art of horse-breeding is something extraordinary, as it is clearly traceable to the use of the thoroughbred horse, whatever Mr. Spooner, in a minority of one, may say to the contrary. By Gemma di Vergi, by Loyola, by Hunting Horn, by Preceptor, by Master Fenton, by Acrobat, came over and over again in the catalogue. This was further proved by the brood mares, which pretty generally were more of a harness than riding stamp, though the winner is a game varmint old mare, while a barren chesnut, the best mover of the lot, was ordered off a deal too soon. The hacks we did not see out, but the best pony, Mr. Raddon's Maggie, by Southampton, is a very picture of blood-like beauty, as finely framed as a race-horse, and a bargain, at any rate some little time since, at £35! The Devonshire cart-horses still show a strong taste of the pack-horse, and some of the mares were very much of a muchness with others entered as suitable for breeding hacks and hunters. There were in all only eight entries in a couple of classes, yearlings and two-year olds, the black prize colt being of immense size, standing close upon seventeen hands high; and as the boxes of the prize stallions were under some admirable arrangement kept carefully locked, we can really say nothing as to their merits.

Let the far-away reader only fancy to himself a system under which the visitor is called upon to pay half-a-crown at the outset, and is then denied a fair sight of the show. Only let him further fancy animals in the rings with whips of paper or parchment fixed to their heads, as on the horses these invisible numbers are carefully placed *away* from the spectator's side of the ring, so that it is utterly impossible to distinguish one entry from another, and the catalogue for the time is simply useless. Only let the far-away stranger, again, conceive a catalogue not merely interleaved with advertisements, like the Barnum business they have made of it at Islington, but with these advertisements actually printed as part and parcel of the catalogue itself! Thus, half a page or so is given to an entry of stock, and the other half in great glaring type to Mr. Somebody's "Large Assortments" and "Moderate Charges," or Mr. Thingammy's "Woollens and Worsteds." Anything more annoying or discreditable has rarely been tried on in this way, and we protest on the part of an indignant public. Moreover, these disfigured catalogues ran short by ten o'clock in the morning, as somebody had forgotten the key or forgotten where he had locked them up, or on some equally good showing they were not forthcoming. Only let the stranger, happily far away at home by his own fireside, call in his fancy still further to picture the clouds gathering and the rain falling, or pouring down in deluges, until the ground is reduced to a swamp here, or floods up as a lake there; and the

Devonshire lassies pick their way daintily, all in red morocco boots and red striped or stained petticoats—too sad tell-tales of that humid atmosphere and of that ruby soil. Shall we go on to say, then, there was a large show of sheep?—Is there anything more wretched than a sheep on a thoroughly wet day?—And Mr. Tremaine, from Grampond, and Mr. Potter, from Thorverton, had all the best of the Leicesters, the champion ram being from Colonel Inge's flock. Then, there were the useful South Devons or South Hams, where Mr. Badcock was first with three very uniform rams, a compliment which could not be extended to the class. And there were other Longwools and Dartmoors and Exmoors, and Somerset and Dorset Horns, which pleased Mr. Masfen, all the way from Staffordshire, very much, if he sought in vain for Shropshires or Southdowns. And while my Lord Portsmouth is judging horses his black pigs are winning prizes, firsts and seconds, for black is all the fashion in these parts, and Mr. Fisher and Mr. Mangles and Mr. Eden counted as "no account," however great their authority in Leeds, Liverpool, or York. And still it rains and rains, and the pigs are cross and won't be put up or put upon, and people who have hoped on in vain fly at length that slough of despond for fresh boots and early trains.

The exhibition of implements was mainly confined to local makers and agents, of whom the following is a list: J. Ayshford, Old Crabtree, Broad Clist, Exeter; J. Asken, 27, Charles-street, Hampstead-road, London; W. Adams, Poltimore, Exeter; W. Brenton, Polbathic, St. German's, Cornwall; H. Beare, Newton Abbott, Devonshire; T. Brinsmead, St. Giles, near Torrington, Devon; W. Bragg, Sandford, Crediton, Devon; J. Bradford, Washfordpyne, Morehard Bishop, Devon; J. Bell and Co., 490, Oxford-street, London; C. Burrell, Thetford, Norfolk; R. B. Body and Co., East-street, Plymouth; R. J. Curson, South Seal, Okehampton, Devon; W. Chamberlain, Dodbrooke, Kingsbridge, Devon; Day, Son, and Hewitt, 22, Dorset-street, Baker-street, London; J. and W. Dicker, Chagford, Devon; Denning and Co., Chard, Somerset; J. Davy, Crothole, St. Germans, Cornwall; R. Drew, Morehard Bishop, Devon; G. Davis, Royal Polytechnic, Regent-street, London; J. Eddy, Kennford, Exeter, Devon; J. Easton and Son, Northernhay-street, Exeter; J. Fowler and Co., Leeds; T. Franklin, Clist, Honiton, Exeter; J. Goss, King-street West, Plymouth; Gowe Manure Company, 2, Westminster Chambers, Victoria-street, London; R. Godbeer, Queen-street and Gandy-street, Exeter; Garton and King, Exeter; Hayman and Co., Sidwell-street, Exeter; W. Hogg, Upton Pyne, Exeter; W. Huxtable, Fare Mile Iron Works and Honiton Foundry, Devon; J. J. Hawkes, London Inn-square, Exeter; J. King, Great Coggeshall, Essex; E. Kerr, Henry-street, Dublin; Langdale's Manure Company, Newcastle-on-Tyne; S. Lewin, Poole, Dorset; J. Lucton and Co., Hatherleigh, Devon; G. Milford, Thorverton, Cullopington, Devon; J. Maunder, Ottery St. Mary, Devon; T. Milford and Son, Thorverton, Cullopington, Devon; T. Mortimer, Brown's Farm, Kenn, near Exeter; J. Matthews, Weston-super-Mare, Somerset; F. P. Milford, Kenn, Exeter; H. Merrifield, Ese Island, Exeter; H. Norrington, Exeter; W. Marshall, Upton Pyne, Exeter; Pollyblank and Co., Newton Abbott, Devon; Parnall and Son, St. Thomas, Exeter; S. Pearce, Exeter; Plimsaul Brothers, Plymouth; N. Page, Morehard Bishop, Devon; Phillips and Co., Aller, near Newton Abbott, Devon; Roberts and Son, Bridgewater, Somerset; G. H. Reed, Chagford, Devon; Ransomes, Sims, and Head, Ipswich; Reeves and Son, Westbury, Wilts; Standfield and Crosse, London Inn-square, Exeter; R. C. Silvester, St. John's-terrace, Clerkenwell, London; Singer, High-street, Bristol; C. Staddon, Bramford Speke, Devon; Smith and Sons, Chard, Somerset; B. C. Tipper, Balsall Heath, Birmingham; W. Toms, Yeovil, Somersetshire; Vivian and Sons, Swansea, South Wales; Watts and Co., George-street, Plymouth, and High-street, Exeter; T. Winter, Pilsford Hill, Wiveliscombe, Somerset; H. Webber, Morehard Bishop, Devon; Wallis and Steevens, Basingstoke, Hants; White and Co., 65, Trinity-square, Borough, London; J. Wright, Sandford, Crediton, Devon;

W. Webber, Chawleigh, Chulmleigh, Devon; and W. A. Wood, 77, Upper Thames-street, London.

PRIZE LIST.

JUDGES.—Cattle: E. Elliott, Landulph, Saltash, Cornwall; J. Wood, Harewood Hill, Darlington; J. Quartly, Molland, Southmolton.

Horses: Lord Portsmonth, Eggesford House, Wenbworthy; J. Woodley, Halshanger, Ashburton; W. C. Spooner, Eling, Southampton.

Leicester, Exmoor, Dorset, and Somerset Horn Sheep and Pigs: R. H. Masten, Pendelford, Wolverhampton; J. J. Clarke, Scopwick, Sleaford; J. H. Hutchinson, Manor House, Catterick, Yorkshire.

South Devon, Dartmoor, and other Long-wool Sheep: W. Paige, Treboni, St. German, Cornwall; J. Sanders, Bicton; S. Boone, Lutton, Brent, Ivybridge.

CATTLE.

DEVONS.

Bulls exceeding three years old.—First prize, J. Davey, Flitton Barton, Northmolton (Duke of Flitton the 5th); second, Lord Falmouth, Tregothnan, Probus, Cornwall (Jonquil); third, W. Salter, Northtawton Barton, Northtawton. Highly commended: J. Gould, Bampfylde Lodge, Poltimore (Triumph).

Bulls above two and not exceeding three years old.—First prize, W. Farthing, Stowey Court, Bridgwater (Master Harry); second, Lord Falmouth, Tregothnan (Kingcraft); third, J. Jackman, Hexworthy, Lanneston (Earl of Hexworthy). Highly commended: Lord Falmouth, Tregothnan (Cinnamon).

Bulls above one and not exceeding two years old.—First and second prizes, J. Jackman, Hexworthy; third, W. Salter, Northtawton Barton. Highly commended: E. C. Norrish, Efford, Shobrooke, Crediton.

Cows exceeding three years old, in calf, or having had calf within four months.—First prize, T. B. Powlesland, Stockley Pomeroy (Queen); second, N. Cook, Chevithorne Barton (Favourite); third, J. Gould, Poltimore, Exeter (Spot).

Heifers not exceeding three years old, in calf, or having had calf within four months.—First prize, G. Turner, Bramford Speke, Exeter (Marguerite); second, W. Farthing, Bridgwater; third, N. Cook, Chevithorne Barton, Tiverton (Rose). Highly commended: W. Morgan, Colhayes Farm, Buckereil, Honiton. Commended: T. B. Powlesland, Stockley Pomeroy (Lady 2nd).

Heifers not less than twelve months nor exceeding two years old.—First prize, W. Farthing, Bridgwater (Fair Rosamund); second, R. Burton, The Vineyard, Broadelast (Graceful); third, J. Gould, Bampfylde Lodge (Florence). Highly commended: G. Turner, Bramford Speke, Exeter (Devoniensis).

SOUTH DEVONS.

Bulls exceeding three years old.—First prize, W. R. Coulton, Dean Court, Buckfastleigh (Tom); second, R. A. Cutmore, Rocombe Barton, Stokeinteignhead, Teignmouth; third, W. Heyward, Higher Staplehill, Highweek, Newton Abbott. Highly commended: J. Irish, Poulston, Halwell, Totnes (Hercules).

Bulls above two and not exceeding three years old.—First prize, R. Cook, Burraton Farm, Plymouth; second, J. Whiteaway, Teignharvey, Teignmouth (Teignway); third, H. M. Cork, Woodford Farm, Plympton. Highly commended: R. A. Cutmore (Billy).

Bulls above one and not exceeding two years old.—First prize, W. Coaker, Charleton Court, Kingsbridge (Admiral 3rd); second, Messrs. Oldreive Brothers, Landcombe and Little Dartmouth, Dartmouth; third, E. R. Cornish, Lower Torr, Mounts, Totnes (Sir Roger). Highly commended: J. Fairweather, Malton, Kingsbridge.

Cows exceeding three years old, in calf, or having had calf within four months.—First prize, G. May, Sheephay, Modbury (Week); second, Messrs. Oldreive Brothers (Beauty); third, W. Coaker (Beauty). Highly commended: W. Adams, Lower Rew, Kingsbridge (Gentle).

Heifers not exceeding three years old, in calf, or having had calf within four months.—First prize, W. Coaker; second, F. W. Coaker, Stokenham, Kingsbridge; third, W. Coaker.

Heifers not less than twelve months nor exceeding two years old.—First and second prizes, W. Coaker.

SHORTHORNS.

Bulls exceeding three years old.—First prize, J. W. Paull Knott, Oak House, Hminster (Prizetaker); second, E. Boltho, Trewidden, Penzance (Aaron); third, J. Rendell, Collinswell, Newton Abbot (Chancellor).

Bulls above two and not exceeding three years old.—First prize, D. R. Scratton, Ogwell, Newton Abbot (Earl of Fawsley 3rd); second, W. H. Hewett, Norton Court, Taunton (Crown Prince).

Bulls above one and not exceeding two years old.—First prize, Messrs. Hosken and Son, Loggans Mill, Hayle, Cornwall (Duke of Oxford); second, J. Horswill, jun., Burns Hall, Lew Down (King of Oxford); third, Messrs. W. Hosken (Knight of Penwith).

Cows exceeding three years old, in-calf, or having had calf within four months.—First prize, W. H. Hewett, Norton Court, Taunton (Nelly); second, R. W. Pollard, Blagdon, Paignton (Wild Iris); third, R. W. Pollard (Princess Jersey).

Heifers not exceeding three years old, in-calf, or having had calf within four months.—First prize, Messrs. Hosken and Son, Loggans Mill, Hayle (Countess of Oxford 2nd); second, W. H. Hewett, Norton Court, Taunton (Lady Eleanor); third, J. Rendell, Collinswell, Newton Abbot.

Heifers not less than twelve months nor exceeding two years old.—First prize, R. W. Pollard, Blagdon, Paignton (Crocus 3rd); second, R. W. Pollard (Rose).

CHANNEL ISLANDS CATTLE.

Bulls exceeding one year old.—First prize, E. A. Sanders, Stoke House, Exeter (Victor Emmanuel); second, G. D. W. Digby, Sherborne Castle, Dorset (Midshipman).

Cows exceeding three years old, in-calf, or having had calf within four months.—First prize, G. D. W. Digby, Sherborne Castle, Dorset (Diamond); second, R. N. G. Baker, Heavitree, Exeter (Daisy).

Heifers not exceeding three years old, in-calf, or having had calf within four months.—First prize, E. A. Sanders, Stoke House, Exeter (Lily of the Valley); second, R. Burton, The Vineyard, Broadelast (Fancy); third, E. Ford, Abbotskerswell, Newton Abbot (Gay Lass).

EXTRA PRIZES.—A silver cup, of 10 gs., for the best Devon bull, to be kept in the county for one year from the 1st of June, W. Salter, Northtawton.

A Silver Cup of 10 gs., for the best South Devon bull, to be kept in the county for one year from the 1st of June, W. Coaker, Kingsbridge.

A Silver Cup of 10 gs., for the best Shorthorn bull, to be kept in the county for one year from the 1st of June, J. W. Paull, Hminster. Special Prize of £5, given by the President, for the best bull exhibited in any of the cattle classes, J. W. Paull (Shorthorn).

Special Prize of £5, given by the President, for the best cow or heifer exhibited in either of the classes, W. H. Hewett, Norton Court; cow in calf (Shorthorn).

S H E E P.

LEICESTERS.

Yearling Rams.—First, second, and third prizes, J. Tremain, Palsne, Grampond, Cornwall.

Rams of any other age.—First prize, T. Potter, Yellowford, Thorverton, Cullompton; second, G. Turner, Bramford Speke, near Exeter; third, T. Potter, Yellowford, Thorverton, Cullompton.

Pens of five yearling ewes.—First prize, J. Tremain Palsne, Grampond, Cornwall; second and third, G. Turner, Bramford, Speke, Exeter.

Pens of five ewes, aged two years and upwards, with their lambs.—First prize, G. Turner, Bramford Speke, Exeter; second, and third, J. Gould, Bampfylde Lodge, Poltimore, Exeter.

SOUTH DEVONS.

Yearling rams.—First prize, J. Badcock, Bearscombe, Kingsbridge; second, J. Badcock; third, J. Badcock. Highly commended: J. Willcocks, Windsor, Yealmpton.

Rams of any other age.—First prize, J. S. Hallett, Sherford Barton, Plympton; second, G. Martyn, Trewen House Camelford, Cornwall; third, W. Harvey, Frogmore Farm, Ashprington, Totnes. Highly commended: J. Badcock, Bearscombe, Kingsbridge.

Pens of five yearling ewes.—First prize, R. C. Clark, Barne

Barton, St. Budeaux, Plymouth; second, J. Stooke, East Sherford, Plympton; third, H. Pain, High House, Kingsbridge.

Pens of five ewes, of two years old and upwards, with their lambs.—First prize, J. S. Hallett, Sherford Barton, Plympton (the special prize of £5, given by Mr. R. Durant, was also taken by this pen); second, J. Stooke, East Sherford, Plympton; third, F. W. Coaker, Stokenham, Kingsbridge. Highly commended: R. C. Clark, Barne Barton, St. Budeaux.

OTHER LONG-WOOLS.

(Not qualified to compete in the foregoing classes.)

Yearling rams.—First prize, J. H. Amory, Knightshayes Court, Tiverton (Devon); second, R. Corner, Torweston, Williton, Somerset (D. von); third, J. H. Amory, Knightshayes Court, Tiverton (Devon). Commended: R. Corner, Torweston, Williton, Somerset (Devon).

Rams of any other age.—First prize, R. Corner, Torweston Williton, Somerset (Devon); second, R. Corner (Devon) third, R. Corner (Devon).

Pens of five yearling ewes.—First prize, R. Corner, Torweston, Williton, Somerset (Devon); second, R. Corner (Devon); third, C. T. Ford, Oakhay Barton, Stoke Canon, Exeter.

Pens of five ewes of two years old and upwards, with their lambs.—First prize, F. Doble, Craddock, Uffculme, Culmpton (Devon); second, J. H. Amory, Knightshayes Court, Tiverton (Devon); third, R. Corner, Torweston, Williton, Somerset (Devon). Commended: W. Way, Sobey's, Alphington, Exeter (Devon).

DARTMOORS.

Yearling rams.—First and second prizes, R. May, Grendon, Tavistock. Highly commended: R. Palmer, Venn Barton, Beaworthy, Northlew, Exbourne.

Rams of any other age.—First prize, T. Squire, South Brenton, Lamerton, Tavistock; second, J. Adams, Moore, South Brent. Highly commended: R. Palmer, Venn Barton, Beaworthy, Northlew, Exbourne.

Pens of five yearling ewes.—First prize, T. Squire, South Brenton, Lamerton, Tavistock; second, R. May, Grendon, Tavistock.

Pens of five ewes of two years old and upwards with their lambs.—First and second prizes, R. May, Grendon, Tavistock.

EXMOORS.

Rams of any age.—First prize, J. Davy, Flitton Barton, Northmolton; second, W. Smith, Hoopern, Exeter.

Yearling ewes.—First prize, Lord Poltimore, Poltimore Park, Exeter.

Pens of five ewes of two years old and upwards, with their lambs.—First prize, Lord Poltimore.

SOMERSET AND DORSET HORNS.

Rams of any age.—First, second and third prizes, H. Mayo, Coker's Frome, Dorchester.

Yearling ewes.—First and second prizes, H. Mayo. Highly commended: Viscount Bridport, Cricket St. Thomas, Chard.

Pens of five ewes of two years old and upwards, with their lambs.—Second prize, H. Mayo. Highly commended: W. Harding, Boxey Barton, Beer, Axminster.

SPECIAL PRIZES.—A special prize of £5, given by the President, for the best ram exhibited in any of the sheep classes.—T. Potter, Yellowford (Leicester). A special prize of £5, given by the President, for the best pen of ewes exhibited in any of the sheep classes.—F. Doble, Uffculme (Devon long-wooled).

HORSES.

FOR AGRICULTURAL PURPOSES.

First prize, C. Bown, Middlezoy, Bridgewater a dark bay stallion (Protection); second, W. Miller, Stoodleigh Farm, West Buckland, a roan stallion (Young Surrey); third, Messrs. Oldreive Brothers, Landcombe and Little Dartmouth, a bright bay stallion (Bismarck). Highly commended: W. Langdon, Trimstone Barton, Ilfracombe, an iron grey stallion (Briton). Commended: J. Joyce, Wadham, Knowstone, South Molton, jet black stallion (Young Matchless).

Mares in foal, or with foal by their side.—First prize, T. Pellow, Kerslake, Okehampton (Flower); second, G. Elliott, Swilley Farm, Plymouth (Blossom), and foal; third, W. Pitts, Shutterton, Starcross (Smart), and foal. Highly commended: J. Palmer, Hensill, Sandford, Crediton (Darling), and foal; Messrs. Turpin and Sons, Hitchcombe Farm, Plympton St.

Mary (Duchess), and foal. Commended: J. Pile, Berry Farm, Branscombe, Sidmouth (Teemer), and foal.

Fillies foaled in 1869.—First prize, N. Cook, Chevithorne Barton, Tiverton; second, W. M. Hellier, Marsh Barton, Clyst St. George, Topsham.

Colts, Geldings, or Fillies foaled in 1870.—First prize, G. Elliott (Sampson); second, N. Cook (Black Prince).

JACKS OR HUNTERS.

Mares in foal, or having a foal by their side.—First prize, A. Gould, Blackheath, Exminster (Dolly); second, Messrs. T. Palmer and Sons, Borough, Kelly, Tavistock (Polly), and foal; third, N. Cook (Mary Gold). Commended: E. A. Sanders, Stoke House, Exeter (Sensation), and filly.

Geldings or fillies foaled in 1865.—First prize, G. B. Battams, Kilworthy, Tavistock (Bismarck); second, J. Michelmore, Berry Pomeroy, Totnes (Rob Roy). Highly commended: E. Ashley, Honiton (Fanny). Commended: W. A. Jarvis, Higher Bolberry, Kingsbridge (Tichborne).

Geldings or fillies foaled in 1869 or 1870.—First prize, W. Trist, Langford Barton, Ugborough, Ivybridge (The Claimant); second, W. Trist (Nimrod). Highly commended: E. Osmond, Woodrow, Braunford Speke (Miss Florence). Class commended.

Mares or geldings over four years old, and exceeding fifteen hands high.—First prize, Messrs. W. Pedrick and Brice, gelding; second, N. Cook, mare (Polly). Highly commended: E. A. Sanders, Stoke House, Exeter, mare (Cherry Stone).

Mares and geldings over four years old, not exceeding fifteen hands high.—First prize, Messrs. Pedrick and Brice, gelding; second, N. Cook, mare (Polly). Highly commended: E. A. Sanders, Stoke House, Exeter, mare (Cherry Stone).

PONIES.

Ponies of any age or sex under fourteen hands high.—First prize, T. Raddon, Plymouth, mare (Maggie); second, W. Rookes, Baring House, Exeter, Welsh gelding (Beauty); third, W. Smith, Hoopern, Exeter (Tom).

PIGS.

LARGE BREED.

Boars, not less than six months old.—First prize, Messrs. J. Wheeler and Sons, Long Compton, Shipton-on-Stour, Warwickshire, Berkshire (Black Jack); second, J. Dove, Hambrook House, Hambrook, near Bristol (Wonder); third, J. Dove (Lord Hambrook). Highly commended: Messrs. J. Wheeler and Sons (Young Sam).

Sows of any age in farrow or with their litters.—First and second prizes, Messrs. J. Wheeler and Sons (Berkshire); third, E. Prugel, Black Horse, Sherborne (Berkshire—Duchess). Highly commended: J. Dove (York). Commended: Messrs. J. Wheeler and Sons (Daisy).

SMALL BREED.

Boars, not less than six months old.—First prize, Earl of Portsmouth, Eggesford House, Wemblyton (Governor); second, Earl of Portsmouth (Stingo). Highly commended: W. F. Collier, Woodton, Horrabridge. Commended: J. Partridge, Bow, North Devon (improved Essex).

Sows of any age in farrow or with their litters.—First prize, T. R. Cornish, Walsgrove, Bishopsteighton (Lucy); second, W. F. Collier; third, Messrs. J. Wheeler and Sons (Miss Jewell).

At the Luncheon, Lord Devon would own that when the idea of forming an association to comprise the whole of the county was first started, he was one of those who—however desirable the object might be—entertained very serious misgivings as to its practicability. He knew well that in this large county the fact was that in many distant parts of it there were gentlemen who devoted energy, money, time, and ability in the promotion of various local agricultural associations, and knowing the good they did in different localities, he felt doubtful whether for the purpose of a more general exhibition they would throw the same amount of ability and heart into the work they would be called on to perform. But the result of this meeting showed that such misgivings were unfounded; and what they had seen to-day, although the meeting had been held under circumstances which he would merely mention by the gentle name of unfavourable, was a convincing proof of how deep and universal was the interest of the whole county in this Association. And he did not refer merely to the

number of exhibitors—unprecedented though it was in the annals of almost any county association—but he also referred to the attendance in that tent and those outside in the yard, who by their going there under such circumstances evinced their anxiety to see what the County Association could exhibit. He thought they might congratulate themselves on having inaugurated an experiment which, if carried on as it had been begun, promised to be exceedingly successful, not merely in its pecuniary results, but in the general good it would do to the community at large, in the economical benefits that would be produced by the improvements in the various objects they had seen around them to-day, and in the stimulus that would be given to different localities by their endeavours to be represented in such an exhibition as this. He had long felt that the intercourse of those who lived in the neighbourhood of Exeter with their friends in the north and west of the county was comparatively infrequent, and he therefore thought it would be for the benefit of the county at large that men from different parts should be brought together with an interest in one common object. He believed that if this society continued to be conducted fairly, liberally, and energetically as on the present occasion, it would deserve and continue to receive the support now given it. One incidental benefit connected with such a meeting as this was that all classes connected with agriculture—from the labourer upwards—would feel themselves bound together by a common interest when they saw that the objects with which they themselves had particularly to deal were the object of so very much attention to the Devonshire Agricultural Association.

Mr. S. T. KEKEWICH, M.P., recollects the first establishment of the Devon Agricultural Society. There were very few there who shared that pleasure with him. That (the old Society) was established a very few years, and answered a very good and useful purpose, but before it had got out of its infancy, it was—well he would not say kidnapped—but taken possession of by another Society—the Bath and West of England Society. He believed it was a happy thing for the Devonshire Society at that time that it ceased to exist, as a separate society, and was united with the Bath and West of England. And let him add it had caused no jealousy whatever, and the visit of the Bath and West of England Society to Plymouth, next year, would show that there was no jealousy existing. It was gratifying to find that this show was so successful, but he

regretted that he had not met his old friend more in sunshine, and less in tears. He had heard, and also read in the papers, many nostrums to render animal food cheaper—one of them was that all the women of the country should abstain from eating animal food. He should, however, be very sorry to inflict such a penalty on the fair daughters of his native country. He believed the real and only way to meet the difficulty was to grow as much beef and mutton and other animal food as they could.

The CHAIRMAN, the Duke of Somerset, could assure them that he took the greatest interest in the agriculture of the county of Devon—in fact, every one was taking a great interest in agriculture, and for this reason—that they saw butchers' bills growing very high, and they all wished them to be more moderate. It reminded him of a couplet in Byron—

That greatest of all earthly ills,
The inflammation of our weekly bills.

There was a great outcry at the high price of meat, and in order to meet the demand, preserved and potted meats had been brought into use. It would be most unwise, if this country were really able to produce sufficient. Looking at some agricultural statistics recently, he found that cattle and sheep were largely decreasing; this was so according to the statistics of 1870-1. Now let them look at the population of this country, which was 31,000,000, and yet there were only 31,000,000 sheep, so that if everyone were to eat his sheep this year there would be none left. There were only 9,000,000 head of cattle. The next question, therefore, for the farmers and agriculturists of the country to consider was how they could most rapidly increase the stock in this country. There was no doubt that for many years to come it would pay well to increase cattle and sheep very largely, but the great question to solve was—how are they to feed and fatten the animals? This agricultural show had done this much—it had shown the energy and power of the county, and if that energy and power continued, it would no doubt add largely to the stock of food of the county. In spite of the weather it was a most successful show; and if this could be done in the "green tree, what could not be done in the dry?" Although this meeting had been a little damped by the weather, it was largely attended.

THE OXFORDSHIRE AGRICULTURAL SOCIETY.

MEETING AT THAME.

The first show of this Society, since its separation from the Banbury Society took place at Thame on Wednesday, May 22. There was a far larger number of visitors than was ever known when the two Societies were amalgamated. The entries were also larger. There were nearly one hundred cattle exhibited, Mr. G. Garne, of Churchill Heath, again carrying off the champion prize. The other principal prize-takers were Mr. J. A. Mumford, Mr. J. Deuchfield, and Mr. John Hutt; while Mr. G. A. Lepper, of Aylesbury, won the silver cup for the best hunter. There was a good show of sheep, both in number and quality, and Mr. J. Treadwell carried off several prizes. Mr. H. Mumfrey, of Kingstone Farm, Shrivensham, had first honours for his Berkshire pigs, of which there was a very creditable show. There was a large display of implements, by Gibbons, Wantage; Browning, Oxford; Eddison and Nodding, Oxford and Cowley; Pearce, Thame; Messer, Thame; Nalder, Tetworth; Cheney, Thame; Gilbert, Shippon; Hope, Wellingborough; Bell and Co., London; Pouting and Co., Thame; and Roberts, Haddenham.

PRIZE LIST.

JUDGES.—CATTLE: C. Howard, Biddenham, Beds; and J. Stratton, Alton Priors. HORSES: J. Bullford, Hordley; and J. M. K. Elliott, Heathcote. SHEEP AND PIGS: E. Little, Lanhill, Wilts; and J. Tombs, Langford.

CATTLE.

Champion prize, for the best horned animal, a silver cup, value £5 5s., to G. Garne, Churchill.

Bull, two years old and upwards.—First prize, £5, G. Garne; second, £3, C. A. Barnes, Charleywood. Highly commended: J. T. Senior, Aylesbury. Commended: J. A. Mumford, Brill House.

Bull, under two years old.—First prize, £5, G. Garne; second, £3, T. Garne and Son, Broadmoor. Highly commended: S. Dickers, Tetworth.

Cow (having already produced one calf), in-milk or in-calf, three years old and upwards.—First prize, £5, G. Garne; second, £3, J. A. Mumford. Highly commended: G. Garne. Commended: J. A. Mumford.

Heifer, in-milk or in-calf, under three years old.—First prize, £5, J. T. Senior; second, £3, R. Treadwell, Shalstone Grounds.

Heifer, for breeding purposes, under two years old.—First prize, £5, and champion prize, G. Garne; second, £3, J. T. Senior. Highly commended and reserved: C. A. Barnes. Highly commended: S. Dickers, T. Garne and Son, and G. Garne. Commended: C. A. Barnes.

Pair of cows in-milk, of four years old and upwards.—First prize, £5, J. Deuchfield, Burston; second, £3, J. Hutt, Water Eaton. Highly commended: J. Deuchfield.

Pair of cows or heifers, under four years old, in-milk.—First prize, £5, not awarded; second, £3, R. Tetley.

Best animal exhibited in classes 6 or 7.—Prize, a silver cup, or plate, value £5, J. Deuchfield.

Two fresh oxen and two heifers (not shown for a prize). T. Taylor, Aston House.

HORSES.

Brood mare, for breeding hunters.—Prize, a silver cup, value £5 5s., A. R. Howland, Thame. Highly commended: G. Gent, Brill. Commended: F. H. Davenport, Headington Hill.

Hunter, under six years old, being at least equal to 13 stones weight, exhibited by a tenant farmer.—Prize, a silver cup, value £5 5s., G. A. Lepper, Aylesbury.

Nag horse for general purposes.—First prize, £5, Capt. H. C. Norris, Holton Grove; second, £3, A. R. Howland. Commended: Mrs. Lord, Chilton House.

Cart mare, with colt or foal this season.—First prize, £5, W. Way, Albury; second, £3, W. Way. Commended: J. Hutt.

Cart colt or filly, above two and under four years.—Prize, Mrs. Rowland, Shabington.

Cart colt or filly, under two years.—First prize, £5, W. T. and T. Frankin, Ascott; second, £3, A. R. Howland.

SHEEP.

Oxfordshire Down shearing ram.—First prize, £5, J. Treadwell, Upper Winchendon; second, £3, A. F. M. Druce, Eynsham.

Oxfordshire Down ram, above two years old.—First prize, £5, J. Treadwell; second, £3, J. Treadwell.

Oxfordshire Down ram.—Plate, value £4 4s., J. Treadwell. Pen of five breeding Oxfordshire Down ewes, with their lambs.—First prize, £5, J. Treadwell; second, £3, J. Treadwell.

Long-woolled shearing ram.—First prize, £5, Executors of the late F. Gillett, Kilkenny; second, £3, S. Smith, Somerton.

Long woolled ram, above two years old.—First prize, £5, Mrs. Godwin, Troy Farm; second, £3, Executors of the late T. Gillett. Highly commended; Mrs. Millington, Ardley.

Pen of five breeding long-woolled ewes, with their lambs.—First prize, £5, Executors of the late T. Gillett; second, £3, S. Smith.

Eight ram lambs (not shown for a prize).—T. Taylor, Aston House.

PIGS.

Boar, not exceeding 18 months old.—First prize, £5, H. Humfrey, Shrivensham; second, £3, Rev. H. G. Baily, Swindon. Highly commended: H. Humfrey.

Boar.—Plate, value £3 3s., H. Humfrey. Sow in farrow, or with pigs.—First prize, £5, H. Humfrey; second, £3, J. Biggs, Cubington. Highly commended: Rev. H. G. Baily.

At the dinner, Mr. A. W. HALL, the chairman, said, so far as the prosperity of the agricultural world went, there was one important question which they saw on the threshold, and that was the labour question. He supposed that most of them were agreed that so far as some parts of England were concerned things would not have gone on much longer as they were, owing to the dearth of provisions. In some parts unquestionably wages were very low, and the question with the men was what was to be done. Two remedies had been tried by them. The first was strikes, than which nothing could have been more barbarous, inasmuch as action had preceded argument, instead of following it. In the second place unions were devised, and here he would ask them to permit him to digress for a moment, in order that he might refer to a personal matter. He had been told that he was himself on strike, and a large subscriber to the union. Permit him to take that public opportunity of assuring them that he was not on strike, nor yet a member of the union, neither had he directly or indirectly ever supported it. He hoped that he was too good a friend to the agricultural labourer to do that, because he thought that what they disliked about the union was not its powers of bringing men together for eliciting argument on true ideas—that was the bright side of it—but what they hated about it, and justly hated, was that it fostered, encouraged, and tended to lengthen strikes. Now strikes, even if they could be shown to be for the benefit of the skilled artisan and the mechanic, which he very much doubted, certainly never could be any benefit to the agricultural labourer. It was patent in this way, inasmuch as the labour those men produced was of the primest and best quality; but they, as practical men, knew that the labour agricultural men produced was not always of the primest quality. There were no doubt some labouring men who might be worth 13s. or 14s. a week, but what proportion, he would ask, did they bear to the great majority. They knew that it was a very small proportion. What was to become of that proportion if their demand was

to be persisted in? What was to become of the laudable custom of the farmer finding a man a job when he could very well go without him—and of keeping the old man on when he knew that the young one would be of more value to him? He was sure that they would not like to be turned adrift when a job was finished, like a bricklayer's labourer; but if they would persist in the demands which noisy agitators had persuaded them to prefer in some parts of the country, it must be so. In this county it was not so bad yet, but it behoved them as practical men to forestall this dissatisfaction, and strangle this monster of disaffection in its birth. He thought that in the end they might strangle it, but they ought not to be hard on the labourer. They must remember that he had been stirred up by men who were thinking more of their own elevation than of his. It was a question between landlord and tenant, no less than between tenant and labourer. If these exorbitant demands were persisted in two things ought to be considered, firstly, the reduction of rents, and secondly, emigration. The competition for farms pretty well proved that the desire for an agricultural life was so great that a man would pay more for a farm than as a man of business he ought, rather than have no farm at all ("No, no"). Emigration had many friends to pat it on the back, but he confessed that he was not one of them. They had had enough of emigration already. When the tidal wave of emigration had swept over them they would find that the industrious and thrifty were gone and that the idle or ne'er-do-well remained. Was there any way by which they could keep their people at home, and make them contented with such a wage as the farmer could afford to pay? Remember, so long as they were discontented the problem was not solved, and it would still hang over their heads like the sword of Damocles, or like a train of gunpowder which at any moment an unprincipled agitator might fire. The question must be settled, they must hit upon a plan which would satisfy the labourers and do them justice without injury to other interests. He thought that there was a plan by which the labourer might be made more contented, and which would give him a more direct stake in his parish, and by which he would be enabled to increase his income without coming to them for it, and he believed that that plan was one that had two branches: firstly, good cottages; secondly, and principally, a large increase in the allotment holdings at a fair rent (A VOICE: "No, no; that will not do"). He did not think it was a plan altogether free from objections, and they could say that of but few plans. He maintained that it was a plan that would prevent the farmer from suffering any loss from raising the rate of wages. It was a plan that was guilty of a delightful inconsistency, or to borrow a phrase from Mr. Disraeli's vocabulary, it was an amiably flagrant one. It would make the labourer more dependent and yet more independent. It would make him more dependent because it would keep him at home, and more independent inasmuch as he could then give himself a day's work when nobody else would do so. He commended this plan to their consideration, and he advised them not to pool-pool it. They might wish to hear arguments on either side of the question. They were anxious to solve the problem of contenting the labourer without ruining themselves. He considered any chink of daylight, however small, that was thrown upon this question, ought to be examined into most carefully. The labourer was not so big a fool as some took him to be on the one hand, nor was he on the other that angelic being that his so-called political friends endeavoured to depict him. He had found him like other people, anxious to serve number one. He was not, however, an ambitious man, and if they could by any scheme of that kind keep him out of the hands of political agitators they would be some stages on the road which would lead to the solution of this very difficult question.

Mr. HENLEY, M.P., said their excellent chairman had touched upon a subject which was of interest to them all. He had touched upon that most difficult question which was at present agitating the country from one end to the other, viz., that of wages and labour. Now, he need not tell them, for all who were there would realize the truth, that supply and demand would settle that, and must settle it, no matter what agitators wanted to do or what kind-hearted people wanted. The supply and demand would settle the price of labour, as it had settled the price of everything else. If the supply was greater than the demand they would pay less for it, and so it

was with every article, and everything was subject to these rules. Old men who remembered what this country was many years back, would be thankful to deal with this subject in a quieter manner than that in which they had to deal with it something like thirty or forty years ago. Since then, however, wages had increased nearly 25 per cent. He thought that he was not wrong in saying—and perhaps some hardly knew what the state of things then was—that in what was called the low wage parishes the current rate of wages was about 8s. a week. Now, he believed, that no labourer received in any parish less than 10s. a week, and some received more. That therefore showed, whatever people might tell the labouring classes, that, as people had become fewer, wages had steadily increased. There was no doubt that there was a constant and increased demand for labour all over the country. They must meet this question, and as wise men they would meet it, with a fair and open hand. But, depend upon it, they could not shut their eyes to the fact—and he was talking to an assembly of men who could take the trouble to inquire into and find whether what he told them was true—that, in principle, as labour increased in price, the cost of labour decreased. It seemed an anomaly. He saw a gentleman shaking his head, but could he get a ditch dug for the same rate of wages per pole as he could by the job? Five-and-thirty years ago this question received a great deal of attention from the House of Commons, and some men whom he saw present could recollect the distress that was then caused. What was the result of the inquiry by the House of Commons? It was found that in Scotland higher rents and higher rates were paid than here per acre, but they were not so depressed, because they charged much less per acre in the labour of the farm than in the low-wage counties of England. He hoped it would not be thought ill of him in bringing these things before their notice, because as thinking men they could inquire and test for themselves whether it was right or wrong. Within the last two years a similar statement had been made by a gentleman of the name of Culley, a commissioner who was sent around by the Government to inquire into the labour question some years ago. That gentleman worked out the thing with great care, and he showed conclusively by figures that in Bedfordshire the cost per acre in cultivating the land was higher than it was in Northumberland, where the price of labour was high. He knew that a person who had not had his attention called to it would not easily believe it. He felt it his duty to call their attention to those things, that they might think of them, and some of them who employed men at 8s. a week knew how much labour they could get out of them. If a man was better fed, he, like a horse, would get through his work quicker, and do more work in a day. He mentioned those things in order that all of them in their respective stations might not look with a jealous eye at each other, and that each might meet each other—labourer, farmer, and landlord—and do by others as they would be done by themselves. They should look at it in a kindly spirit, and in that way they would do more to keep on the agitator than in any other way. He did not speak without some warrant on this matter. He had no doubt that some of them would recollect the "Swing" riots about forty years ago. What happened then? We had reason to bless ourselves now that, instead of the question being raised by breaking machinery and burning their homesteads, the persons had come forward more quietly though in some instances they had had agitators among them. It was, however, a blessed change to see the way in which parties approached each other from what they did in those days. What happened in our own country? He thought that if they, the farmers, approached the question in a right spirit, they would settle it themselves. The mischief broke out in Kent, and they had in this county a few days' warning of it, but it spread almost like lightning through Surrey and Hampshire into Berkshire. The magistrates of Oxfordshire assembled, that each, in their respective neighbourhoods, should go round and ask the people to be sworn in to keep the peace. Sixteen parishes were allotted to him and his late friend Mr. Ashurst, and they had a good day's work. In twelve out of the sixteen parishes they did not scruple to meet them to a man, but in the other four they said that they would not be sworn, but would do what was right. What was the language of the labouring classes at that time? He never should forget it if he lived as long again as it had pleased God he should

live already. A great deal was said about the ignorance and want of knowledge by those men. This was the language the men used at that time, "We hardly know what it means, but we can see this plain enough; we must either stand by the law or go against it." In one parish the men said, "We have always been kingsmen, and so we intend to abide." Yet some people would say that those men were ignorant, but no greater mistake was ever made. He thanked God that we in this county escaped the disgrace of a special commission. The offences that were committed were not numerous; but those that were committed were at Little Milton and the neighbourhood, and extended nearly to Banbury, with one remarkable exception. At that time the Duke of Marlborough was living at Blenheim, and had let his own farm. A single man marched into his farmyard, and called out to the people in the house, "I am the mob, bring me a hammer;" but, what was more remarkable still, they brought him one, and he smashed the machinery with it. He heard the man tried at the Oxford Sessions. It showed a better state of things now than then. He believed that if they met the men in a fair and liberal spirit, they would be met in the same way by the men themselves. He had never yet had reason to doubt it. He had seen a little of the labouring classes in his lifetime, and he was of opinion that if they did not act fairly towards the men they would not act fairly towards them. That was the conclusion his experience had led him to come to. It was his belief, though it might appear an anomaly, that if they made the labour dearer they would get their labour done for less. They would never make him believe that the farmer who paid 8s. a week would take the trouble to look after the men, as he would those to whom he paid 12s. or 14s. a week. According as men were looked after they would get more work done, and that was the way they could get cheap labour. Another thing he would call their attention to, and it was a remarkable change. Forty years ago the men rioted and broke machines, and got hard thrashings for themselves. Now they could not get a man to do that hard work. They did not want the thrashing or the mowing, and were quite content to let the machines do it for them. It only came to the same thing; and he could not too strongly impress it upon all their minds that the supply was less and the demand more for labour. If they wanted to sell their corn or beasts they would now get more money, and if they wanted to buy men's labour they would have to pay more money for it. The only way to get at truth was for each party to speak his mind, and then they would arrive at something that was wise and good.

A SHORTHORN HERD BOOK IN CANADA.—It is important that Shorthorn breeders in the United States understand that the committee on the publication of this Herd Book have decided to admit to registry, as thoroughbred, all Shorthorns having 15-16ths or more of Shorthorn blood, or, in other words, that *four consecutive crosses of Shorthorn bulls constitute a thoroughbred, whatever blood there may be back of these.* The committee cite, in justification, the authority of the British Herd Book; but there is a very decided difference in the two cases, of which the *Buffalo Live Stock Journal* properly remarks: "The English Shorthorn Herd Book presumes that the ancestors beyond these four or 15-16ths crosses, are *well-bred* Shorthorns of the ancient original stock not recorded in their Herd Books, of which there are multitudes in England, that being the land of their ancestry, time immemorial; while in America—Canada as well as the United States—beyond such four known crosses, we have nothing to fall back on but the native cattle, composed of any and everything kept by the ordinary farmer. It will be readily seen by every breeder of *pure* Shorthorn blood that a wretched system of bastardy will not only follow, but be thus directly encouraged, so long as *grade* cattle with only 15-16ths of *pure* Shorthorn blood can be recorded in their Herd Books. Such a record, however much satisfaction it may give to the Canadian Shorthorn breeders, who encourage it, can meet with little approbation on this side of the border." It will, therefore, be highly proper for purchasers of Canadian Shorthorn stock to scrutinize the pedigrees carefully, so as to know whether they are buying grades or thoroughbreds. It is not likely that those of our breeders who have learned to scarce at a pedigree tracing to the "importation of '17" will take kindly to Canadian grades.—*The Prairie Farmer.*

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

The half-yearly meeting was held on Wednesday, May 22nd, in Hanover Square, the President, Sir Watkin W. Wynn, M.P., in the chair.

After some formal preliminary business,

Lord KESTEVEN proposed that Earl Cathcart should be the President for the ensuing year. The noble earl had been a member of the Council for a considerable number of years, and filled the office of Steward at Bury St. Edmund's with diligence and ability; while another recommendation of the motion was that in the ensuing year the Country Meeting was to be held at Hull, and that the noble earl belonged to Yorkshire.

Lord CHESHAM seconded the motion, which was unanimously adopted.

Earl CATHCART, in returning thanks, said he thought he should best show his appreciation of the honour conferred upon him by his attention to the duties of the office.

On the motion of Dr. CRISP, seconded by Mr. HERBERT LITTLE, the Trustees were re-elected, as were also the Vice-Presidents, on the motion of Mr. FINLAY, seconded by Mr. KIMBER.

The meeting next proceeded to the election of the council, the result being that the house-list was adopted, therein being two new members, Mr. H. Chaplin, M.P., and the Marquis of Exeter.

The Secretary, Mr. H. M. JENKINS, then read the following report:

Since the 1st General Meeting in December, 57 Members have died, and 144 Members have withdrawn, or have been removed from the list by order of the Council; on the other hand, 2 Governors and 157 Members have been elected. The Society, therefore, now consists of: Life Governors, 71; Annual Governors, 73; Life Members, 1,655; Annual Members, 3,953; Honorary Members, 14—making a total of 5,766. The accounts for the year 1871 have been examined and certified by the auditors and accountants of the Society, and have been published, together with the Wolverhampton Country Meeting account, in the last number of the *Journal*. The funded capital of the Society remains the same as at the last half-yearly meeting, namely, the permanent Fund of £20,000 New Three per Cents., and the Reserve Show-fund of £4,112 7s. 8d. New Three per Cents. In addition, the sum of £2,000 lies on deposit with the Society's bankers, and the balance of the current account on the 1st instant was £1,595 3s. 6d., both these sums being available for defraying the expenses of the Cardiff meeting. The Earl of Leicester has been elected a Member of the Council, to fill the vacancy caused by the election of Sir A. K. Macdonald, Bart., as a Trustee. The Cardiff Local Committee are co-operating with the Council to promote the success of the ensuing Country-meeting. In conjunction with the Glamorganshire General Agricultural Society, they have added to the Society's Prize-list offers of Prizes for Hunters and Roadsters, as well as for Agricultural and other classes of Horses, for Castle Martin and other breeds of Cattle, for Radnor Sheep and for Butter and Cheese. Nineteen farms have been entered to compete for the prizes offered by the President, Sir Watkin W. Wynn, Bart., M.P., and by the Society for the best-managed farms in South Wales and Monmouthshire, and the judges have reported that after their first visit they were able to select such as were deserving of further examination. The prize list in connection with the Cardiff meeting has been further augmented by the Marquis of Bute and Major Picton Turbervill, who have offered prizes for plans of cottages suitable for agricultural labourers, to cost not more than £220 per pair, and for others suitable for the mineral districts, to cost not more than £90 each. The conditions relating to certain classes of live-stock have been under the careful consideration of the Council, and

the following rules have been inserted in the prize sheet for the Cardiff meeting in place of those relating to the same classes which were previously in force:

No Cow will be eligible for a Prize unless certified either at the date of entry, or between the date of entry and that of the Show, to have had a living Calf—or that the Calf, *if dead*, was born at its proper time—within the twelve months preceding the date of the Show.

No Heifer, except yearlings, entered as in-calf will be eligible for a Prize unless she is certified to have been bulled before the 31st of March in the year of the Show, nor will her owner afterwards receive the Prize until he shall have furnished the Secretary with a further Certificate before the 31st of January in the subsequent year, that she produced a living Calf; or that the Calf, *if dead*, was born at its proper time.

No Mare will be eligible for a Prize unless certified either at the date of entry, or between the date of entry and that of the Show, to have had a living Foal—or that the Foal, *if dead*, was born at its proper time, and in the year of the Show—or in the event of a Mare being exhibited *without* a Foal at foot, a certificate shall be produced at the time of entry of her having been served, and the Prize shall be withheld till a certificate be produced of her having produced a Foal.

In accordance with the scheme of rotation of districts recently arranged by the Council, the Country Meeting for 1873 will be held in the district comprising Northumberland, Durham, and the North and East Ridings of Yorkshire. Invitations having been received from the authorities of Darlington, Hull, and Newcastle, a Committee was appointed to inspect and report upon the sites, and other accommodation offered by the competing localities. After duly considering the report of this Committee, the Council have decided that the Country-meeting for 1873 shall be held at Hull. The Council have also to announce that the district which has been assigned for the Country-meeting of 1874 comprises the counties of Bedford, Cambridge, Essex, Hertford, Huntingdon, Norfolk, and Suffolk.

The Governors of the Royal Veterinary College have appointed Professor J. B. Simonds to fill the vacancy in the office of Principal of the College created by the death of Professor Spooner. In consequence of this appointment Professor Simonds is unable to retain the post of Veterinary Inspector to the Royal Agricultural Society. The Council have resolved to make the usual grant to the Royal Veterinary College for the current year, on condition that one of the Professors of the Royal Veterinary College be allowed to act as the Veterinary Inspector of the Society. The Governors of the College have accepted this arrangement and have also agreed to the following schedule of Members' Veterinary Privileges:—

I. SERIOUS OR EXTENSIVE DISEASES.—No. 1. Any Member of the Society who may desire professional attendance and special advice in cases of serious or extensive disease among his cattle, sheep, or pigs, will, on application to the Secretary, obtain the services of the Society's Veterinary Inspector, to visit the place where the disease prevails.

No. 2. The remuneration of the Inspector will be £2 2s. each day as a professional fee, and £1 1s. each day for personal expenses; and he will also be allowed to charge the cost of travelling to and from the locality where his services may have been required. The fees and expenses will be a charge against the applicant; but this charge may be reduced or remitted altogether at the discretion of the Council, on such course being recommended to them by the Veterinary Committee.

No. 3. The Inspector, on his return from visiting the diseased stock, will report to the Committee, in writing, the results of his observations and proceedings, which Report will be laid before the Council.

No. 4. When contingencies arise to prevent a personal discharge of the duties confided to the Inspector, he may, subject to the approval of the Committee, name some competent pro-

fessional person to act in his stead, who shall receive the same rates of remuneration.

II. ORDINARY OR OTHER CASES OF DISEASE.—Members may obtain the attendance of the Veterinary Inspector on any case of disease by paying the cost of his visit, which will be at the following rates, viz., £2 2s. per diem, and travelling expenses.

III. CONSULTATIONS WITHOUT VISIT.—Personal consultation with the Veterinary Inspector	5s.
Consultation by letter.....	5s.
Consultation necessitating the writing of three or more letters.....	10s.
Post-mortem examination, and report thereon	10s.

A return of the number of applications during each half-year being required from the Veterinary Inspector.

IV. ADMISSION OF DISEASED ANIMALS TO THE VETERINARY COLLEGE, INVESTIGATIONS, LECTURES, AND REPORTS.—No. 1. All Members of the Society have the privilege of sending cattle, sheep, and pigs to the Infirmary of the Royal Veterinary College, on the same terms as if they were Members of the College, viz., by paying for the keep and treatment of cattle 10s. 6d. per week each animal, and for sheep and pigs "a small proportionate charge to be fixed by the Principal according to circumstances."

No. 2. The College has also undertaken to investigate such particular classes of disease, or special subjects connected with the application of the veterinary art to cattle, sheep, and pigs, as may be named by the Council.

No. 3. In addition to the lectures now given by the Professor of Cattle Pathology to the pupils in the Royal Veterinary College, on special occasions the College undertake that one of the Professors shall also deliver such lectures before the Members of the Society, at their house in Ilanover Square, as the Council shall desire.

No. 4. The Royal Veterinary College will authorise their Principal to furnish to the Council quarterly, a detailed Report of the cases of cattle, sheep, and pigs treated in the Infirmary, and also Special Reports from time to time on any matter of unusual interest, which may come under the notice of the College.

The Council have also to announce that they have appointed Professor Simonds Consulting Veterinary Surgeon to the Society. The Agricultural Education examination was held at the Society's rooms on the days from Tuesday, April 16th, to Saturday, April 20th, inclusive. Three of the candidates who entered at the proper time, and eight of those who entered too late for prizes, appeared and were examined. Of those who were eligible for prizes, Mr. T. S. Minton has gained a first-class certificate, the life membership of the Society, and the prize for agriculture, in which subject he passed a very good examination. Of the other gentlemen, four passed, namely, Mr. Brown, Mr. Champion, Mr. Ashdown, and Mr. Elwell, who obtained first-class certificates, and the life membership of the Society. All these gentlemen have been students at the Royal Agricultural College at Cirencester.

Mr. HICHEN moved the adoption of the report, which he regarded as perfectly satisfactory, and as doing honour to the Society.

Mr. W. BOTLY, in seconding the motion, congratulated the meeting that the Society's finances were in such a prosperous state, and remarked that the offering of prizes for improved labourers' cottages was a step in the right direction.

Dr. CRISP could not concur in the complimentary language just used. In the first place, he must again enter his annual protest against the connection between that Society and the Veterinary College, as being most damaging, in his opinion, to the progress of veterinary science. It was, indeed, utterly impossible that that science could make any progress while such a connection existed. The veterinary profession was snubbed in every way. For example, not long ago a gentleman named Brown left a large sum of money to encourage the investigation of the diseases of domestic animals, the appointment of a superintendent being left to the authorities of University College. It was natural to suppose that a veterinary surgeon would be chosen for such an office; but that was not done. Veterinary science was altogether in a most unsatisfactory state. On the last occasion when he appeared there, having introduced the subject of the Game-

laws, he was told that it could not be discussed in that room. He then remarked that the charter stated that one object of the formation of that Society was the welfare of the agricultural labourer; but, on looking over the transactions of that Society, he found that very little had been said, or at least done, in furtherance of that object. They all knew that at the present time there was a movement amongst agricultural labourers, and it was a movement that must increase. It was very easy to pooh-pooh it, and say it must be put down, but he had no doubt that the strike among the agricultural labourers would ultimately place them in a better position than they were at present. That was a question which especially concerned a Society like that, and yet nothing was said in the report about agricultural labourers, except in relation to cottages—a matter which concerned landlords perhaps more than labourers.

The CHAIRMAN interposing, said it certainly appeared to him that good housing was a most important thing for labourers.

Dr. CRISP said, at all events he had hoped that the report would contain something more with regard to the condition of agricultural labourers. He had no wish to create a discussion in that meeting; but he should be glad if some such proposition as this were adopted: "That a committee of this Society be formed to inquire into the present state of the agricultural labourers throughout England and Wales, in relation to the rate of wages, cottage accommodation, and other matters, to use the words of the charter, that concern their general welfare." He brought that before the meeting as a suggestion for the Council, and he thought that in that light it was well worthy of consideration, and hoped that something of the kind would be introduced in the next report. The Government inquiries on the subject did not appear to him at all satisfactory. The real question was how a man with only 10s. a week was to support out of it a family of six or seven persons—how it was possible for him out of such a sum to get a meat dinner and a pint of beer every day, and to put by something for old age. That question was one which must ultimately come before the Society. He wished to avoid saying anything that might introduce ill-feeling, especially as he knew that the occupation of farming was, considering the amount of capital required to carry it on, not very remunerative; but still the question must hereafter be dealt with.

Mr. YATES FREEBODY, C.E., wished he could join in the congratulations expressed by the mover and seconder of the motion; but to his mind the report told of decadence, and when he looked round that room and thought of the attendance 20 years ago, the decadence seemed to him very marked. Two years ago he brought under the notice of the Council the fact that while they were accumulating a great deal of money they were doing very little good to agriculture. That lamentable fact was patent. Some years ago the late Mr. Raymond Barker used to tell those on that (the members') side of the table to wait till the Society had got £5,000 at its bankers, and then they would see what the Council would do. The accumulated fund reached £5,000, £10,000, £15,000, and for some years past had been £20,000; and what was the result? Why, the very first paragraph of the report showed a falling off of 50 in the number of members. The position of the *Journal* was contemptible as compared with that which it ought to occupy. As a civil engineer he should be ashamed to turn out plans like those which had been published in the *Journal* recently. When Mr. Fusey had the management of that periodical it contained articles which were interesting to a great number of farmers, but now almost every practical farmer who took it up must admit that he found it rather tough reading. Last year he wrote to the Council suggesting that a committee of life governors, life members, and annual members should be appointed to confer with the Council as to the best means of using the large amount which was then lying idle for the improvement of the agriculture of England; but the reply which he received from the Secretary was to the effect that the Council had considered the matter, and thought the 9th clause prevented such a step from being taken. He could not help thinking, however, that that clause gave very ample powers, and he thought the suggestion was worthy of adoption. As regarded the veterinary question, he thought that Society should have its own officers, receiving such salaries as would entitle the Society to the whole of their services. To

ask the members to pay three guineas whenever they required veterinary assistance seemed to him contemptible. The Society ought to jump into the breach, and send down a salaried officer to make the necessary investigation. Thirty years ago, when he was a young man, he was employed in making reclamations of land from the sea, and as the result he could point to thousands of acres with growing crops where boats once swam. During his early days a prize was offered by the Council in connection with that subject. He sent what he knew was worth the prize, but it was not entertained, and he had never heard anything about the matter since (laughter). Members might laugh, but he had not come there after the lapse of so many years merely on account of his disappointment. Results had shown that he was right. As to the chemical department, he regretted that when the plaintiff in the late suit, Mr. Bradburn, wrote to the Council, he was not met in a proper, straightforward manner, the result being a lawsuit which had cost five or six hundred pounds. The average condition of the river waters was most abominable; but when he asked his old friend Mr. Druce why he did not send some of it to London for analysis, his reply was that it would cost him two or three pounds. That was the first block to improvement, and it ought to be removed. As to the improvement of farming by means of competition for prizes, something had indeed been done by Sir Watkin individually; but how much had been done, comparatively speaking, by the Society? He wanted to see three or four counties classed together every year, and a prize given for the best farm in each division. He had no wish to propose any motion that would cause a division in the meeting, but, like a good many persons out-of-doors, he wished something to be done to render that Society more practically useful. He hoped it had now reached the lowest point. There was plenty of talent and energy; but the steam-engine would not go along unless the fire were lighted, and they should all endeavour to make that Society what it ought to be. He regarded the education scheme of the Council as a gross mistake, and he could not understand anyone congratulating the Council on that subject. Two or three years ago they were told that there was to be a library of reference, but he had not been asked into any such library that day. As to the shows he felt that the Council were incurring vast expense to very little purpose; and he believed that if they were to consult some intelligent practical engineers they would not lose so much money (A Voice: "Nonsense"). Notwithstanding that rude interruption, he maintained that a great deal of money was lost.

Mr. HERBERT LITTLE could not admit that the state of things in that Society was anything like as dark as it was painted by the last speaker. He would certainly like to see twenty instead of five thousand members; and if those who had experienced the benefits of membership would but bestir themselves a little the list of members might be augmented almost indefinitely. As to the *Journal*, he did not at all agree with the last speaker that it was despicable. It was quite true that it contained a good deal of technical writing; but that was inevitable, and if it were brought down entirely to the level of the most uneducated and unintelligent persons it would cease to be really useful. With regard to the veterinary profession, he concurred in the opinion that it was not in a satisfactory state. A short time ago he had on his farm a most terrible and fatal disease, which had prevailed more or less for some years past; he meant splenic apoplexy. A veterinary surgeon was sent down from London to investigate the cause and suggest a remedy; but he could only give very cold comfort. What he said was in effect that when cattle were too fat they should be walked about the farm till they got lean. That was the remedy suggested for the disease; and veterinary science must be in a very bad state if that were all it could suggest in the case of a fatal malady like that. The condition of the agricultural labourers was one of the most important questions of the day, and it was cropping up in all directions. He did not know whether or not it would be useful to have a committee of that Society to inquire into the causes of the labour movement; but he thought that, considering that in some districts only eight or nine shillings per week was paid, and in others as much as 18s., and yet the wages per acre were as high in the one case as in the other, there ought to be some examination of the causes of that anomaly. A comparative inquiry as to the

food and condition and work of the labourers in the north and those in the south might be very beneficial. As regarded the chemical examination of manures, he thought that if there were one thing which had been more beneficial than another in that Society it was the analyses made by Dr. Voelcker. In his opinion the Society had done an incalculable amount of good by exposing the frauds and impostures practised on tenant-farmers (cheers).

Colonel KINGSOTE, M.P., regretted that the gentleman who had gone back 30 years had not tried to help the Society instead of dragging it through the mire. As regarded the number of members he was mistaken in supposing that there was a diminution; there was, in fact, an increase as compared with the corresponding period of 1871. For some years past every one who had joined the Society had had to sign a paper, in which he undertook to pay the subscription. For want of something of that kind a number of persons previously got into arrear, and the names of many had had to be struck off the list. He could not at all admit a general impression as to the non-utility of the Society; on the contrary, nearly all the tenant-farmers whom he had met during the last twelvemonth told him that they considered it very useful, especially through the labours of Dr. Voelcker with regard to manures and cake. Mr. Freebody seemed to think they were a great deal too rich; but if all his ideas were carried out, instead of a fund of £20,000 they would want one of £50,000. As to the *Journal*, the general feeling in the part of the country where he lived seemed to be that it had never before been so well worth reading as it had been during the last two or three years.

Mr. WELLS, M.P., was glad to hear such approval as had just been expressed of the conduct of the Chemical Committee and the labours of Dr. Voelcker, which he believed tended to benefit, not merely farmers, but the community at large. With regard to the *Journal*, Mr. Freebody should recollect that when it was conducted by Mr. Pusey, steam cultivation and other things of that kind were not thought of. The Education Committee were much disappointed that the number of competitors for the prizes was not large, but they continued their work in the hope that more would ultimately present themselves, and in the belief that though the number of candidates was so small the examinations were useful. The fact that in the last year all the students came from Cirencester College was of course very creditable to that institution, but what the Council desired was a general diffusion of agricultural education through the country. The Council could not be justly charged with having neglected to consider the welfare of the agricultural labourer, important articles relating to his condition having appeared recently in the *Journal*. They had no right to meddle with the question of the rate of wages. No doubt that question was assuming an aspect of great importance; but he thought they would do well to avoid questions which had reference to labourers' unions and things of that kind; and he for one contended that no subjects except such as he had just referred to in the *Journal* should be dealt with by that Society.

Dr. CRISP would ask the speaker what was meant by "the welfare of the agricultural labourer"?

Mr. WELLS said that might be difficult to define, but the charter expressly prohibited the entertaining of political questions; and the question of agricultural labourers' wages, as it was now agitated, came so near politics that the discussion of it there might perhaps be regarded as an infringement of the charter (Hear, hear). As he understood the matter, the term "welfare" meant welfare with reference to the cottages of labourers, their allotments, and other matters of that kind.

Lord KESTVEN said he lived in the part of the country referred to by Mr. Freebody (Lincolnshire), and knew thousands of acres which had been reclaimed; but objects of that kind, important as they might be, were not included in the charter. The reclamation of the fen lands had caused a great rise in the rate of wages in that part of the country. Wages, like everything else, depended on demand and supply, and he presumed that the chief reason why such low wages were paid in the south was that the south was over-peopled with labourers. They must all feel deeply interested in the dwellings of labourers, but there was no part of her Majesty's dominions where labourers were so badly housed as they were on the borders of towns. He could hardly call to mind a single large estate where the labourers' cottages were not

becoming in accordance with the demands of the times; and agricultural labourers generally would, as regarded their dwellings, compare favourably with the average run of mechanics in the metropolis.

Mr. JENKINS, the Secretary, confirmed the statement of Colonel Kingscote on the question of the number of members, observing that a comparison with that time last year showed an increase of two hundred. The library of reference, to which Mr. Freebody alluded, was, he observed, open on all ordinary days throughout the year, with the exception of the days of the two half-yearly meetings. As regarded the *Journal*, he was precluded from speaking of it in any other than a commercial point of view. Comparing the number of copies sold outside the Society with the number sold two or three years ago, the result was satisfactory. There was not a single volume of the *Journal* for some time past that did not contain at least one article bearing upon the welfare of the agricultural labourer.

Mr. W. T. DOWSE wished to add his testimony to the value of the chemical department, which had enabled farmers to use artificial manures to much greater advantage than would otherwise have been possible. He thought it very desirable that a Committee should be appointed to inquire into the condition of the agricultural labourer, for the sake both of the farmers and of the labourers. A great many misstatements had been made which inflicted great injustice on farmers. For example, in *The Times* of that morning, it was stated that the labourers in Kent were paid from 9s. 10d. to 10s. per week. He occupied something like 1,000 acres, and last winter he never paid less than 15s. a week. He knew farmers occupying among them several thousand acres, and the same remark applied to them.

The Earl of LICHFIELD said, as a member of the Council, he should be sorry if any one were to suppose that any suggestion which tended to improve the condition of the labourer would not be carefully considered by them. But, as Dr. Crisp had suggested, the appointment of a Committee of that Society to investigate the matter, he must remind him that it had been fully inquired into already by a Royal Commission. If any one wished for information with regard to the condition of the agricultural labourers throughout the country, he could not do better than read the Report of the Commission on the Employment of Women and Children in Agriculture. [Dr. CRISP: "I have read it?"] Well, that Report contained far more information than could be obtained through the medium of any Committee of that Society. He had listened in vain for some practical suggestion from Dr. Crisp; while as to his statement that the Council had damaged veterinary science by connecting the Society with the Veterinary College, there was, in fact, nothing to support it. The truth was that they were labouring under the same dis-

advantage as all other Societies which had a large reserve fund. The fact that they had a fund of £20,000 made some persons think that they ought to do everything. If a Society like that was to be permanently useful it must always have a good accumulated fund.

Mr. KIMBER, as a practical farmer, wished to observe that if the *Journal* were full of repetitions of the ordinary routine of farming, no agriculturist would be able to get special scientific information when he required it.

Mr. WELLS, M.P., remarked that if the National Rifle Association had not had a reserve fund it would now be bankrupt in consequence of recent losses.

The report was then adopted.

On the motion of Mr. HERBERT LITTLE, seconded by Mr. KIMBER, thanks were voted to the auditors.

Mr. FREEBODY moved a vote of thanks to the Chairman, which was seconded by Mr. HICHEN, and carried by acclamation.

The CHAIRMAN, after returning thanks, proceeded to advert to some of the points raised in discussion. They all knew that the wages of agricultural labourers varied very much. In the district with which he was connected, the amount paid depended very much on what was paid to colliers and persons employed in the Lancashire factories; and everywhere the rate of wages must depend, in a great degree, on demand and supply. Then in Scotland and some other parts of this kingdom besides the money payment there was a certain allowance of meal, potatoes, and all such things must be taken into account in estimating what the labourer received. As to the question of economy in connection with the Society's shows, a committee which was presided over by Lord Vernon had inquired into the matter and made a report, and he hoped that good would result. With respect to the fees and expenses of veterinary inspection, he must remind the meeting that the report just adopted contained these words: "The fees and expenses will be a charge against the applicant; but this charge may be reduced or remitted altogether at the discretion of the Council, on such course being recommended to them by the Veterinary Committee." He believed what was intended was, that in a case of common disease the applicant would have to pay the expenses, but that in a case of rinderpest or splenic apoplexy, or anything of that kind, which was of great interest to the whole country, the Council would send down their own veterinary officer to examine into the matter at the Society's cost. As there had been a great deal of discussion in reference to the condition of the agricultural labourer, he would just remark that it seemed to him quite right that that question should be considered, and he had no doubt that it would before long be taken up by the Council.

The meeting then separated.

IXWORTH FARMERS' CLUB.

The Ixworth Farmers' Club has now been in existence about two years, and so warmly was it taken up at the outset by the agriculturists of the neighbourhood, and so thoroughly and judiciously has it since been supported, that it has succeeded in taking a position amongst the kindred institutions of the county, which is highly creditable to all connected with it. There have been regular practical and useful discussions, all the subjects selected being of more or less interest to agriculturists. In fact, the proceedings of the Club altogether have been of a character calculated to bring about the great ends which its promoters, and the promoters of other Clubs had in view, viz., that the science of agriculture should take its proper position amongst the other honourable and useful pursuits of life, and to bring about an interchange of ideas and practices with a view to mutual benefit. That clubs of this kind are admirably adapted to carry out these objects there can be no question, and therefore they are deserving of every support. The Ixworth Club is doing its part nobly. Being about to suspend operations for the summer months, it was determined that there should be an exhibition of horse stock and sheep-shearing competitions. The proceedings this time last year, when the Club had been in existence about twelve months, were confined to the sheep-shearing, and a tea in the

evening. This year, however, it was resolved to introduce what was rightly thought to be an attractive feature, viz., an exhibition of cart colts, colts, and ponies, and the sequel proved the wisdom of the step, for the entries were more numerous than could have been expected even by the most sanguine, whilst the quality, taken as a whole, left nothing to be desired. At the dinner, Mr. E. GREENE, M.P., the Chairman, said he was exceedingly glad to have the opportunity of congratulating its members on the success which had attended that day's proceedings, for he contended that it was a great success, though the elements had been against them. There was in the present day too great a tendency towards centralization, for having everything done at one place, and this he considered would be one of the greatest evils that could befall our country. One great reason why this country was so prosperous was because we took upon ourselves local Government in various ways, though there might be some difference of opinion as to the way in which that authority should be exercised. There were gentlemen present who had been at considerable trouble to form this Club, and there could be no doubt but that it would have a most wholesome influence in an important direction. Such meetings as these must be productive of much good, aiding agriculturists, as they did, to keep pace with the age in which we lived. The

whole world was allowed to send supplies into our country, and it was, perhaps, a necessity, seeing the population of the country was constantly on the increase, and at the same time it beloved agriculturists to see how far they could improve the cultivation of the soil in order to meet the ever-increasing demand. Considering the increase of wealth and of population it was of the utmost importance that they should rear all the sheep and other stock they could. It was said in the House of Commons the other day that the foreign supply of this country formed only five per cent. of the whole of England. They needed to be under no apprehensions that any evil would result from their efforts to increase the stock of sheep, for he believed that they could not now overtake the demand. Our stock of sheep had become wonderfully short by the dry seasons of 1868 and 1870. There was another respect in which they had no competitor, and that was in regard to horses. He had heard that Mr. Green had got a long price for a yearling that day; and he (the President) considered from circumstances with which they were as well acquainted as he was, that they would find it to answer their purpose to

turn their attention to the breeding of horses. Anything, the commonest animal, would make £40, and if they bred with judgment, they would have no difficulty in making £70 or £80 of their horses. They must, however, take care to breed for action, because nothing else would make a long price. In the present day they would do well to supplement the corn and other productions of their farm by rearing stock of all kinds. There were other matters to which they might continue to direct their attention with advantage to themselves. No doubt at their autumn meeting they should again consider the advantages which were to be derived from the introduction of various modern implements. He was glad to find that the double-furrow plough was coming into very general use. They might depend upon it that they must study economy in various ways. It was just possible that they might have to pay a higher rate of wage, but they must take care to get more labour for their money, and this after all would be the way to benefit all classes. He congratulated them on the fact that the House of Commons had recognised the principle that there should be some re-arrangement of Local Taxation.—*Ipswich Journal*.

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

After a moderate fall of rain at the close of April, which was much needed to soften the crust of the soil and assist the germination of seeds, the month of May opened with as fine a promise as brilliant days of summer could give. Vegetation was forced into vigorous action, and an early harvest appeared a foregone conclusion. But the charm was soon broken by a spell of rough, frosty, and very rainy weather, which has completely dissipated the illusion, and quite made a change in the prices of nearly all sorts of grain. With such uncertain weather there is no calculating upon the future. But the clay lands and those badly drained seem little likely to give a plentiful yield under such circumstances, though straw and grass seem pretty certain to be abundant, provided there be a good time of gathering. Neither is England alone in her surprise at the outward aspect of the "merry month," for rain has been in the ascendant nearly all over Europe as well as cold. Much rye in forward countries has already been badly laid, while fears, to some extent, have prevailed in Southern Russia, from *excessive heat* as to the fate of the corn crops, and at Taganrog quite a panic had set in, with prices demanded too exorbitant for business. Before the rough weather France gave the key note in a rise of 2s. 6d. per sack suddenly on flour at Paris, and though she appears now indisposed to prosecute the movement, she may soon find cargoes destined for her benefit change their course for countries which promise better pay. Dantzic has been doing a great business at 3s. to 4s. advance, most parts of Germany following, and America, always most sensitive to telegraphic despatches, has raised flour to a parity with London prices, just at the time her equals are opening, and many were fearing her exports would lower recent rates. The anticipation, therefore, of our last of a 5s. rise before harvest, has been already justified by events, for from the lowest point this advance has already been realised, and all depends upon the clouds, or rather on their Governor, whether as much more may not yet have to be paid. On the other hand, should fine weather set in, which now seems likely, with fair arrivals, the realisation of profits would be likely to cause a temporary change in favour of buyers. But it is clear the late policy of millers to keep out of stock when prices were low was entirely wrong. The following rates have recently been paid at the several places named: White wheat at Paris 66s., red American 59s. 6d.; best flour 49s. 4d. per sack. Native white

wheat at Bordeaux 59s. 6d., Spanish 60s. 6d.; Beldian-ski wheat at Marseilles 59s. 6d. per qr., Galatz 53s. 6d.; Chili at Havre, 62s.; red wheat at Brussels, 63s. 6d., at Antwerp 62s. 6d., at Courtrai 59s. 6d.; white wheat at Rotterdam, 46s. to 63s., Polish at Amsterdam 60s., Richelle at Zurich 66s. 6d.; red at Cologne, 59s., at Stettin 61s., at Hambro' the same; high mixed at Danzig, cost, freight, and insurance, 66s.; Ghirka at Odessa, 45s. 9d.; white mixed at Alexandria, 43s., Barletta at Naples 54s. 6d.; white at San Francisco, 57s. cost, freight, and insurance; red spring at New York, 56s. per 480lbs.

The first Monday commenced on a small supply of English wheat, with a good arrival of foreign. The show of samples during the morning on the Essex and Kentish stands was moderate, the condition, on the whole, being fair. Though the weather was improved, prices were firm, and choice lots here and there obtained a slight advance. The foreign trade was not extensive, but holders of useful red qualities and the best white samples occasionally obtained some improvement on the prices of the previous Monday. With few cargoes afloat on sale, values were unaltered. As the weather at the opening of the month kept improving, and was quite summerlike, it was remarkable that rates were everywhere maintained, while a few places, as Bristol, Newbury, and Spilsby, were 1s. higher. There was firmness at Liverpool on Tuesday, and this lasted through the week. The Scotch markets were more decidedly dearer, both Edinburgh and Glasgow being up 1s. per qr., but sales were not active. At Dublin and Belfast prices were supported, but trade was not brisk.

The second Monday opened with moderate English supplies, with foreign arrivals rather less than on the previous week. The fresh samples from the near counties not being abundant, and the condition continuing to improve, factors were enabled to obtain an occasional advance from millers, but it was not very freely or generally paid. With foreign qualities it was otherwise, fully 1s. rise being readily made, and the scarcity of fine white enabled factors, in several instances, to obtain 2s. above the rates of the previous week. With few floating cargoes of fine quality on offer, an advance of fully 1s. per qr. was realised. A rapid alteration having taken place in the opening of the week, with frequent hailstorms and heavy showers, it was no difficult matter for the country

COMPARATIVE AVERAGES.

Years.	WHEAT.			BARLEY.			OATS.		
	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.	d.
1868 ...	33,255½	...	73	1,986½	...	43	1,838	...	29
1869 ...	62,917½	...	45	936½	...	37	2,272½	...	27
1870 ...	69,377½	...	45	2,355½	...	32	3,301½	...	22
1871 ...	62,883½	...	58	2,467½	...	37	2,013½	...	27
1872 ...	63,584½	...	56	4,450½	...	35	2,327½	...	24

AVERAGES

FOR THE SIX WEEKS	Wheat.		Barley.		Oats.	
	s.	d.	s.	d.	s.	d.
ENDING	53	11	36	6	21	8
April 13, 1872.....	54	5	36	5	22	8
April 20, 1872.....	51	6	36	4	22	8
April 27, 1872.....	55	1	37	1	23	6
May 4, 1872.....	56	0	36	7	22	10
May 11, 1872.....	56	4	35	8	24	0
May 18, 1872.....	55	0	36	5	22	10
Aggregate of the above.....	58	10	37	7	27	11
The same week in 1871.....						

IOP MARKET.

Mid and East Kent.....	£10 10	.....	£12 12	.....	£17 0
Weald of Kent	8 10	.....	9 9	.....	10 10
Sussex	7 15	.....	8 8	.....	9 9
Farnham and country ...	11 11	.....	13 0	.....	16 0

YEARLINGS.

Mid and East Kent.....	£3 0	.....	£4 4	.....	£6 10
Weald of Kent	3 0	.....	4 0	.....	5 15
Sussex	3 5	.....	3 15	.....	5 12
Farnham and country ...	—	.....	6 0	.....	7 0
Olds	1 5	.....	1 10	.....	2 0

POTATO MARKETS.

SOUTHWARK WATERSIDE.

Yorkshire Flukes	120s. to 160s.
Regents	120s. to 130s.
Dunbar and East Lothian Regents ...	120s. to 160s.
Perth, Forfar, and Fife	110s. to 130s.
French and Belgian Kidneys	110s. to 120s.
French Whites	90s. to 100s.
ROCKS.....	50s. to 80s.

BOROUGH AND SPITALFIELDS.

English Flukes	180s. to 200s. per ton.
Regents	150s. to 170s. "
Rocks	120s. to 140s. "
French Whites.....	90s. to 100s. "
Victorias	180s. to 200s. "

ENGLISH WOOL MARKET.

CURRENT PRICES OF ENGLISH WOOL.	s.	d.	s.	d.
FLEECES—Southdown boggs.....	per lb.	1	10	1 11
Half-bred ditto	"	1	10½	2 0
Kent fleeces	"	1	11	2 0
Southdown ewes and wethers ...	"	1	10	1 11
Leicester ditto	"	1	10	1 10½
SORTS—Clothing, picklock	"	1	7	1 8
Prime	"	1	4	1 5
Choice	"	1	3	1 3½
Super	"	1	2	1 2½
Combing, wether mat.....	"	1	11½	2 0
Picklock	"	1	8½	1 9½
Common	"	1	6	1 7½
Hog matching	"	2	0½	2 1½
Picklock matching	"	1	9	1 10
Super ditto	"	1	6	1 7½

AGRICULTURAL MEETINGS IN 1872.

JUNE 3, 4, 5, 6, and 7.—Bath and West of England Agricultural Society and Southern Counties Association.—Meeting at Dorchester. Entries closed. President, The Duke of Marlborough. Secretary, Mr. J. Goodwin, Terraced-walk, Bath.

JUNE 5.—Royal Agricultural Benevolent Institution.—Dinner at Willis' Rooms, King Street, St. James'. Chairman, Lord Vernon. Secretary, Mr. C. B. Shaw, 55, Charing Cross.

JUNE 11 and 12.—Essex Agricultural Society.—Meeting at Halstead. Entries closed. President, John Robert Vaizey, Esq. Secretary, Mr. R. Emson, Halstead.

JUNE 12.—Royal Jersey Agricultural Society.—Meeting at St. Helier's. Entries close June 1. President, C. P. Le Cornu, Esq. Secretary, Mr. H. P. D'Auvergne, Bath Street, Jersey.

JUNE 12 and 13.—Royal Cornwall Agricultural Society.—Meeting at Bodmin. Entries closed. President, Captain Basset. Secretary, Mr. H. Tresawna, Lamelloy, Probus,

JUNE 19 and 20.—Norfolk Agricultural Society.—Meeting at King's Lynn. Entries closed. President, H.R.H. The Prince of Wales. Secretary, Mr. J. Cross, Norwich.

JUNE 19.—Thorne Agricultural Society.—Meeting at Thorne. Entries close June 14. President, H. W. Godfrey, Esq. Secretary, Mr. Richard Micklethwaite, Thorne.

JUNE 26 and 27.—Cambridgeshire and Isle of Ely Agricultural Society.—Meeting at Cambridge. Entries close for Stock, May 27; for Poultry, June 3. President, Major Pemberton. Secretary, Mr. S. Holben, Market Hill, Cambridge.

JUNE 26, 27, and 28.—Hants and Berks Agricultural Society.—Meeting at Windsor. Entries close for Stock, May 25; for Implements, June 8. President, Lord Bridport. Secretary, Mr. H. Downs, Basingstoke.

JUNE 27 and 28.—Doncaster Agricultural Society. Entries close June 6. Secretary, Mr. W. B. Houlden, 14, Corn Market, Doncaster.

JULY 2.—Ripon and Claro Agricultural Society.—Meeting at Ripon. Entries close June 13. President, The Marquis of Ripon. Secretary, Mr. J. Wood, Ripon.

JULY 4.—Peterborough Agricultural Society.—Meeting at Peterborough. Entries close June 22. President, The Marquis of Huntly. Secretary, Mr. J. Fox, Peterborough.

JULY 4 and 5.—Suffolk Agricultural Association.—Meeting at Bury St. Edmunds. Entries close June 10. President, Lieut.-Col. F. M. Wilson. Secretary, Mr. R. Bond, Butter Market, Ipswich.

JULY 9.—Banffshire Agricultural Association.—Meeting at Cornhill. Entries close June 29. Secretary, Mr. G. Cumming, Banff.

JULY 15, 16, 17, 18, and 19.—The Royal Agricultural Society of England.—Meeting at Cardiff. President, Sir Watkin W. Wynne, Bart., M.P. Secretary, Mr. H. M. Jenkins, Hanover-square, London.

JULY 15, 16, 17, 18, and 19.—Glamorganshire Agricultural Society (in connection with the Royal Agricultural Society of England).—Meeting at Cardiff. Entries closed for Implements; for Stock, June 1. President, The Marquis of Bute. Secretary, Mr. W. V. Huntley, Welsh St. Donatts, Cowbridge.

JULY 24.—Thirsk Agricultural Society.—Meeting at Thirsk. Entries close July 10. President, Major Stapylton. Secretary, Mr. G. Freeman, Market Place.

JULY 24, 25, and 26.—Lincolnshire Agricultural Society.—Meeting at Spalding. Entries close June 22. President, Lord Kesteven. Secretary, Mr. S. Upton, St. Benedict's-square, Lincoln.

JULY 25.—Bedfordshire Agricultural Society.—Meeting at Luton. Entries close July 6. President, Earl Cowper, K.G. Secretary, Mr. T. Lester, St. Peter's Green, Bedford.

JULY 26.—Driffield and East Riding Agricultural Society.—Meeting at Great Driffield. Entries close July 11. President, Lord Londesborough. Secretary, Mr. J. Turner, Great Driffield.

JULY 26.—South Durham and North Yorkshire Horse and Dog Show.—Meeting at Darlington. Secretary, Mr. W. Sewell, Victoria Road, Darlington.

JULY 27.—Wakefield Agricultural Society. Meeting at Wakefield. Entries close July 17. President, J. Shaw, Esq. Secretary, Mr. T. Dodds, Mount Pleasant, Wakefield.

JULY 31, and AUGUST 1 and 2.—Highland and Agricultural Society of Scotland.—Meeting at Kelso. Entries close June 14. President, The Marquis of Tweeddale. Secretary, Mr. F. N. Menzies, George IV. Bridge, Edinburgh.

JULY 31, and AUGUST 1 and 2.—Gloucestershire Agricultural Society.—Meeting at Gloucester. Secretary, Mr. E. W. Trinder, Cirencester.

AUGUST 1.—Preston Agricultural Society.—Meeting at Preston. Entries close July 13. Secretary, Mr. J. Croft, 1, Lune Street, Preston.

AUGUST 1.—Cleveland Agricultural Society.—Meeting at Redcar. Entries close July 17. President, A. H. Turner Newcomen, Esq. Secretary, Mr. H. J. Curry, Stockton-on-Tees.

AUGUST 6.—Tyneside Agricultural Society.—Meeting at Hexham. President, N. B. Beaumont, Esq., M.P. Secretary, Mr. I. J. Harle, Haydon Bridge, Northumberland.

AUGUST 7, 8, and 9.—The Royal Agricultural Society of Ireland and North East Agricultural Association of Ireland.—Meeting at Belfast. Entries close July 1. President, Lord Lurgan. Secretaries, Mr. J. Thornhill, Upper Sackville Street, Dublin, and Mr. Bingham, Belfast.

AUGUST 7, 8, and 9.—Yorkshire Agricultural Society.—Meeting at Malton. Entries close July 6. President, Earl Feversham. Secretary, Mr. T. Parrington, Croft, Darlington.

AUGUST 15 and 16.—Northumberland Agricultural Society.—Meeting at Newcastle-upon-Tyne. Secretary, Mr. J. Wilson, Woodhorn Manor, Morpeth,

- AUGUST 20, 21, 22, and 23.—Birmingham Agricultural Exhibition Society.—Horse Show in Bingley Hall. Entries close August 1. President, Lord Willoughby de Broke. Secretary, Mr. J. B. Lythall, 39, New Street, Birmingham.
- AUGUST 21 and 22.—Royal North Lancashire Agricultural Society.—Meeting at Lancaster. Entries close July 27. President, J. P. Chamberlain Starke, Esq., M.P. Secretary, Mr. G. Hunt, Preston.
- AUGUST 23.—Keighley Agricultural Society.—Meeting at Keighley. Secretary, Mr. R. Fawcett, Keighley.
- AUGUST 27, 28, and 29.—Worcestershire Agricultural Society.—Meeting at Stourbridge. Entries close August 1. President, Lord Lyttelton. Secretary, Mr. A. Buck, Worcester.
- AUGUST 28.—Whitby Agricultural Society.—Meeting at Whitby. Entries close August 14. President, The Hon. O. Duncombe, M.P. Secretary, Mr. W. Stonehouse, Grape-lane, Whitby.
- AUGUST 29.—Farnworth Agricultural Society.—Meeting at Farnworth. Entries close August 19. Secretary, Mr. J. Davenport, Ditton, Warrington.
- AUGUST 31.—Halifax and Calder Vale Agricultural Society.—Meeting at Halifax. Entries close August 17. President, Lieut.-Col. Sir Henry Edwards, Bart. Secretary, Mr. W. Irvine, Cheapside, Halifax.
- SEPTEMBER 1.—Leominster Agricultural Society.—Meeting at Leominster. Entries close August 16. President, J. H. Arkwright, Esq. Secretary, Mr. E. Gregg, South-street, Leominster.
- SEPTEMBER 5.—Richmondshire Agricultural Society.—Meeting at Richmond. President, Christopher Cradock, Esq. Secretary, Mr. J. Wetherell, Queen's Road, Richmond, Yorkshire.
- SEPTEMBER 10, 11, and 12.—Staffordshire Agricultural Society.—Meeting at Stafford. Entries close August 10. President, The Earl of Srewsbury. Secretary, Mr. W. Tomkinson, Newcastle, Staffordshire.
- SEPTEMBER 10.—Carlow Agricultural Society.—Meeting at Tullow. Entries close September 5. Secretary, Sir Thomas P. Butler, Bt., Ballin Temple, Tullow, Co. Carlow.
- SEPTEMBER 11.—Wayland Agricultural Society.—Meeting at Watton. Entries close August 29. President, Lord Walsingham. Secretary, Mr. R. Robinson, Watton, Thetford.
- SEPTEMBER 11.—Royal and Central Bucks Agricultural Society.—Meeting at Aylesbury. Entries close August 21. President, Lord Carlington. Secretary, Mr. G. Fell, Aylesbury.
- SEPTEMBER 11.—Huntingdonshire Agricultural Society.—Meeting at Ramsey. Entries close August 27. President, Edward Fellows, Esq., M.P. Secretary, Mr. J. Dille, Market-place, Huntingdon.
- SEPTEMBER 11, 12, and 13.—Manchester and Liverpool Agricultural Society.—Meeting at Bolton. Entries close August 1. President, The Earl of Bradford. Secretary, Mr. T. Rigby, Winsford, Cheshire.
- SEPTEMBER 12.—Vale of Conway Agricultural Society.—Meeting at Llanrwst. Entries close August 12. President, Lord Aveland. Secretary, Mr. H. Pierce, Brynhy-fryd, Llanrwst.
- SEPTEMBER 12.—Waterford Agricultural Society.—Meeting at Waterford. Entries close September 5. President, The Marquis of Waterford. Secretary, Mr. R. S. Blew, Waterford.
- SEPTEMBER 13.—Herts Agricultural Society.—Meeting at Hatfield. Entries close September 3. Secretary, Mr. G. Passingham, Bengo Temple, Ware.
- SEPTEMBER 16.—Norton Farmers' Club.—Meeting at Chesterfield. Entries close September 3. President, W. Fisher, Esq. Secretary, Mr. F. G. Godwin, Norfolk Market Hall, Sheffield.
- SEPTEMBER 17 and 18.—Northamptonshire Agricultural Society.—Meeting at Weedon. Entries close August 10. President, Sir R. Knightley, Bart., M.P. Secretary, Mr. J. M. Lovell, Harpole, Weedon.
- SEPTEMBER 17.—Carmarthenshire Agricultural Society.—Meeting at Carmarthen. Entries close August 31. President, Lord Dynevor. Secretary, Mr. D. Prosser, White House, Carmarthen.
- SEPTEMBER 17 and 18.—Warwickshire Agricultural Society.—Meeting at Warwick. Entries close for Stock, August 1; for Implements, August 27. President, The Earl of Warwick. Secretary, Mr. J. Moore, Warwick.
- SEPTEMBER 18.—Derbyshire Agricultural Society. Entries close for Stock August 10; for Implements Sept. 14. President The Hon. E. K. W. Coke. Secretary, Mr. J. C. Smith, 15, St. Mary's Gate, Derby.
- SEPTEMBER 19.—Tarpорley Agricultural Society.—Meeting at Tarpорley. Entries close September 7. Secretary, Mr. W. Vernon, Tarpорley.
- SEPTEMBER.—Cheshire Agricultural Society.—Meeting at Chester. Entries close September 1. President, The Marquis of Westminster. Secretary, Mr. J. Beckett, Oulton Pool Cottage, Tarpорley.
- SEPTEMBER.—Lauderdale Agricultural Society.—Meeting at Lauder. President, The Earl of Lauderdale. Secretary, Mr. T. Broomfield, Lauder.
- OCTOBER (during 1st week).—Royal East Berks Agricultural Society.—Meeting at Maidenhead. President, H. R. Grenfell, Esq. Secretary, Mr. W. Bulstrode, Cookham Dean, Maidenhead.
- OCTOBER 7.—Ludlow Agricultural Society.—Meeting at Ludlow. Entries close September 30. President, J. Rawlings, Esq. Secretary, Mr. T. Weyman, Ludlow.
- OCTOBER 15 and 16.—Herefordshire Agricultural Society.—Meeting at Hereford. Entries close September 15. President, Major Peplow Peplow. Secretary, Mr. J. T. O. Fowler, Savings Bank, Hereford.
- OCTOBER.—Framlingham Farmers' Club.—Meeting at Framlingham. Entries close October 1. President, F. S. Corrance, Esq., M.P. Secretary, Mr. W. B. Kent, Earl Soham, Wickham Market.
- OCTOBER.—Ayrshire Agricultural Association.—Meeting at Kilmarnock. President, The Earl of Glasgow. Secretary, Mr. J. M'Murtrie, County Buildings, Ayr.
- OCTOBER.—Blandford Farmers' Club.—Meeting at Blandford. Entries close September 30. President, Henry Fookes, Esq. Secretary, Mr. C. J. Eyers, Bethune Cottage, Blandford.
- NOVEMBER 20.—Carter's Root Show.—At High Holborn. Entries close November 16.
- NOVEMBER 27 and 28.—Rutland Agricultural Society.—Meeting at Oakham. Entries close November 4. President, The Earl of Londale. Secretary, Mr. E. Wortley, Ridlington, Uppingham.
- NOVEMBER 28 and 29.—Chippingham Agricultural Society.—Meeting at Chippingham. Entries close November 21. President, Sir John Neild, Bart. Secretary, Mr. E. Little, Lashill, Chippingham.
- NOVEMBER.—Sturminster Agricultural Society.—Meeting at Sturminster Newton. President, Lord Rivers. Secretary, Mr. H. C. Dashwood, Sturminster Newton.
- NOVEMBER 30, DECEMBER 2, 3, 4, and 5.—Birmingham Agricultural Exhibition Society.—Show in Bingley Hall. Entries close for Stock, November 1; for Implements, November 8. President, Lord Willoughby de Broke. Secretary, Mr. J. B. Lythall, New Street, Birmingham.
- DECEMBER 3, 4, and 5.—Yorkshire Society's Fat Stock and Poultry Show at York. Entries close November 14. President, The Earl of Zetland. Secretary, Mr. J. Watson, Lendal Bridge, York.
- DECEMBER 9, 10, 11, 12, and 13.—Smithfield Club.—Show at Islington.—Entries close for Implements October 1; for Stock, November 1. President, Lord Tredegar. Secretaries, Mr. B. T. Brandreth Gibbs and Mr. D. Pullen, Half-moon Street, Piccadilly.
- DECEMBER 10, 11, and 12.—Leeds Fat Stock Show, in Smithfield Cattle Market, Leeds. Entries close November 6. President, The Mayor of Leeds. Secretary, Mr. J. Swales, Hunslet Road, Leeds.
- DECEMBER 12.—Rugby and Dunchurch Agricultural Society.—Meeting at Rugby. Entries close November 22. President, The Earl of Dalkeith. Secretary, Mr. E. Harris, Rugby.
- DECEMBER 14, 16, and 17.—Newcastle-on-Tyne Fat Stock Show.—Meeting at Newcastle-on-Tyne. Entries close November 14. President, The Mayor of Newcastle. Secretary, Mr. M. T. Anderson, 12, Marlbro' Crescent.
- DECEMBER 17.—Carmarthenshire Agricultural Society.—Meeting at Carmarthen. Entries close December 7. Secretary, Mr. D. Prosser, White House, Carmarthen.
- DECEMBER 17 and 18.—Tredegar Agricultural Society.—Meeting at Newport, Monmouthshire. Entries close November 13. President, Lord Tredegar. Secretary, Mr. J. G. Palling.

END OF VOLUME LXXI.

JAMES GIBBS AND COMPANY,

VITRIOL AND MANURE WORKS,

NEAR VICTORIA DOCKS, LONDON.

OFFICES — 16, MARK LANE, E.C.

SOLE MANUFACTURERS OF THE

PATENT AMMONIA-FIXED GUANO,

Guaranteed to be made from the finest quality of Government Guano, as imported. Has produced equally as good results as the unfixed Guano, and is 30s. per ton cheaper. Recommended for all crops for which Guano is used, and is found superior to it for Potatoes, Mangold, Beet Root, &c. In districts where the rain-fall is above an average, we recommend it for Turnips. It is not only cheaper, but also much more effective than Nitrate of Soda, as Top Dressing, and its effects are more lasting, as may be seen by the after Crops.

Patent Ammoniated Phosphate. Dissolved Bones.
 Superphosphate of Lime. Bone Manure for Turnips.
 Blood Manure for Roots. Blood Manure for Corn.
 Special Manures for Mangold, Barley, Grass, and Potatoes.

JAMES GIBBS & COMPANY have turned their attention specially to the manufacture of these Manures, which contain all the elements necessary to promote the growth of Potato and Turnip crops. The results have given universal satisfaction, and prove the Manures to be the cheapest yet sold.

The "condition" of the above is made a matter of special care. They are all sifted before delivery, to ensure their being fit for the dry or water-drill.

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IMPORTANT TO FLOCKMASTERS.

THOMAS BIGG, Agricultural and Veterinary Chemist, by Appointment to his late Royal Highness The Prince Consort, K.G., Leicester House, Great Dover Street, Borough, London, begs to call the attention of Farmers and Graziers to his valuable **SHEEP and LAMB DIPPING COMPOSITION**, which requires no Boiling, and may be used with Warm or Cold Water, for effectually destroying the Tick, Lice, and all other insects injurious to the Flock, preventing the alarming attacks of Fly and Shab, and cleansing and purifying the Skin, thereby greatly improving the Wool, both in quantity and quality, and highly contributing to the general health of the animal.

Prepared only by Thomas Bigg, Chemist, &c., at his Manufactory as above, and sold as follows, although any other quantity may be had, if required:—

4 lb. for 20 sheep, price, jar included.....	£0 2 0
6 lb. 30 " " " " " " " " " " " "	0 3 0
8 lb. 40 " " " " " " " " " " " "	0 4 0
10 lb. 50 " " " " " " " " " " " "	0 5 0
20 lb. 100 " " " (Cask and measure	0 10 0
30 lb. 150 " " " included)	0 15 0
40 lb. 200 " " " " " " " " " " " "	1 0 0
50 lb. 250 " " " " " " " " " " " "	1 3 6
60 lb. 300 " " " " " " " " " " " "	1 7 6
80 lb. 400 " " " " " " " " " " " "	1 17 6
100 lb. 500 " " " " " " " " " " " "	2 5 0

Should any Flockmaster prefer boiling the Composition, it will be equally effective.

MOST IMPORTANT CERTIFICATE.

From Mr. HEREPATH, the celebrated Analytical Chemist:—
Bristol Laboratory, Old Park, January 18th, 1861.

Sir,—I have submitted your Sheep Dipping Composition to analysis, and find that the ingredients are well blended, and the mixture neutral. If it is used according to the directions given, I feel satisfied, that while it effectually destroys vermin, it will not injure the hair roots (or "yolk") in the skin, the fleece, or the carcase. I think it deserves the numerous testimonials published. I am, Sir, yours respectfully,

WILLIAM HEREPATH, Sen., F.C.S., &c., &c.,
To Mr. Thomas Bigg Professor of Chemistry,
Leicester House, Great Dover-street, Borough, London.

He would also especially call attention to his **SPECIFIC**, or **LOTION**, for the **SCAB** or **SHAB**, which will be found a certain remedy for eradicating that loathsome and ruinous disorder in Sheep, and which may be safely used in all climates, and at all seasons of the year, and to all descriptions of sheep, even ewes in lamb. Price **FIVE SHILLINGS** per gallon—sufficient on an average for thirty Sheep (according to the virulence of the disease); also in wine quart bottles, 1s. 3d. each.

IMPORTANT TESTIMONIAL.

"Scoulton, near Hingham, Norfolk, April 16th, 1855.
"Dear Sir,—In answer to yours of the 4th inst., which would have been replied to before this had I been at home, I have much pleasure in bearing testimony to the efficacy of your invaluable 'Specific for the cure of Scab in Sheep.' The 600 sheep were all dressed in August last with 84 gallons of the 'Non-poisonous Specific,' that was so highly recommended at the Lincoln Show, and by their own dresser, the best attention being paid to the flock by my shepherd after dressing according to instructions left; but notwithstanding the Scab continued getting worse. Being determined to have the Scab cured if possible, I wrote to you for a supply of your Specific, which I received the following day; and although the weather was most severe in February during the dressing, your Specific proved itself an invaluable remedy, for in three weeks the Sheep were quite cured; and I am happy to say the young lambs are doing remarkably well at present. In conclusion, I believe it to be the safest and best remedy now in use.
"I remain, dear Sir,

"To Mr. Thomas Bigg," "For JOHN TINGEY, Esq.,
"R. RENNEY."

§ Flockmasters would be well to beware of such preparations as "Non-poisonous Compositions;" it is only necessary to appeal to their good common sense and judgment to be thoroughly convinced that no "Non-poisonous" article can poison or destroy insect vermin, particularly such as the Tick, Lice, and Scab Parasites—creatures so tenacious of life. Such advertised preparations must be wholly useless, or they are not what they are represented to be.

DIPPING APPARATUS.....£14, £5, £4, & £3.

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1st Class—Not Hazardous	1s. 6d. per Cent.
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